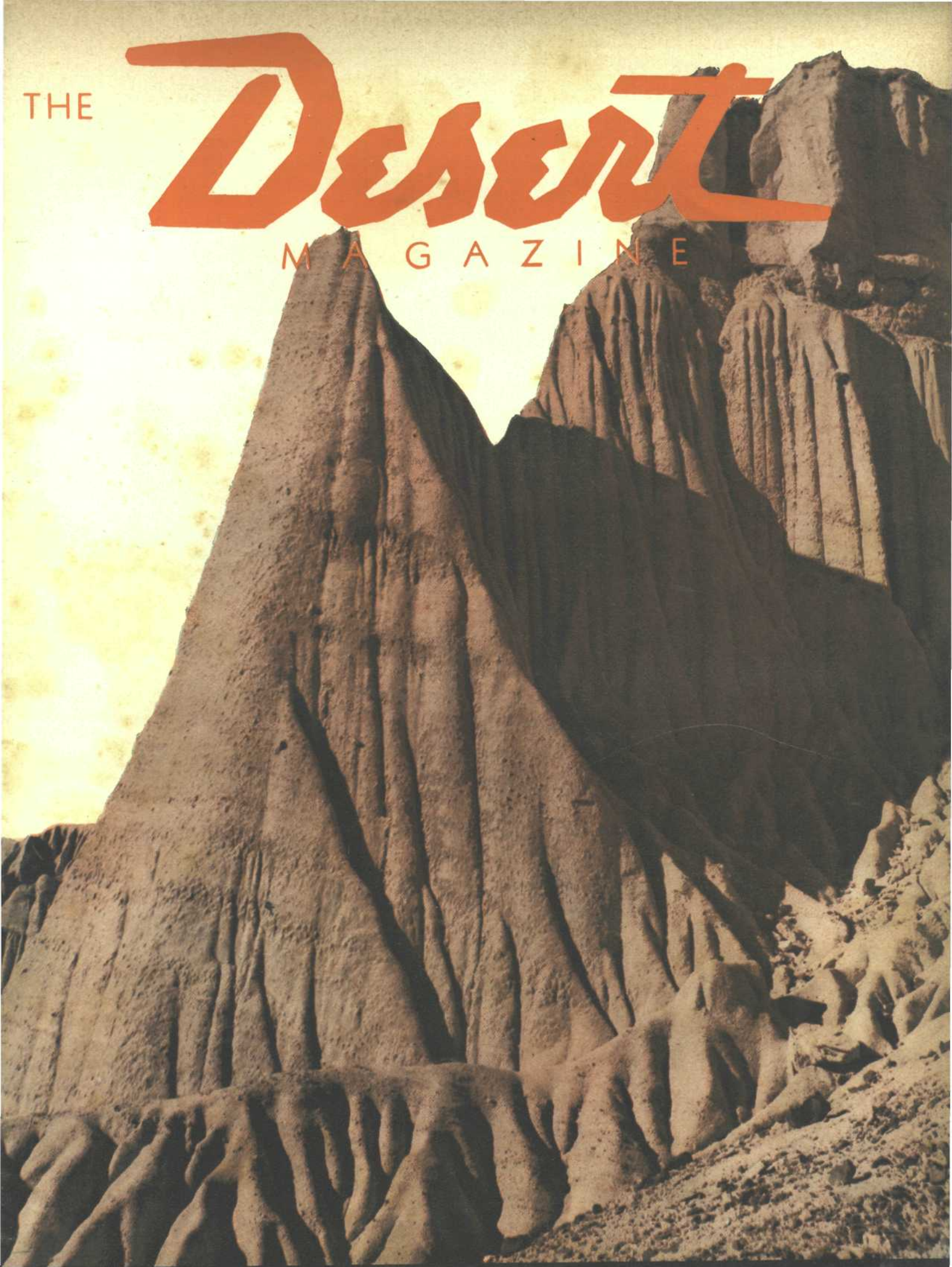


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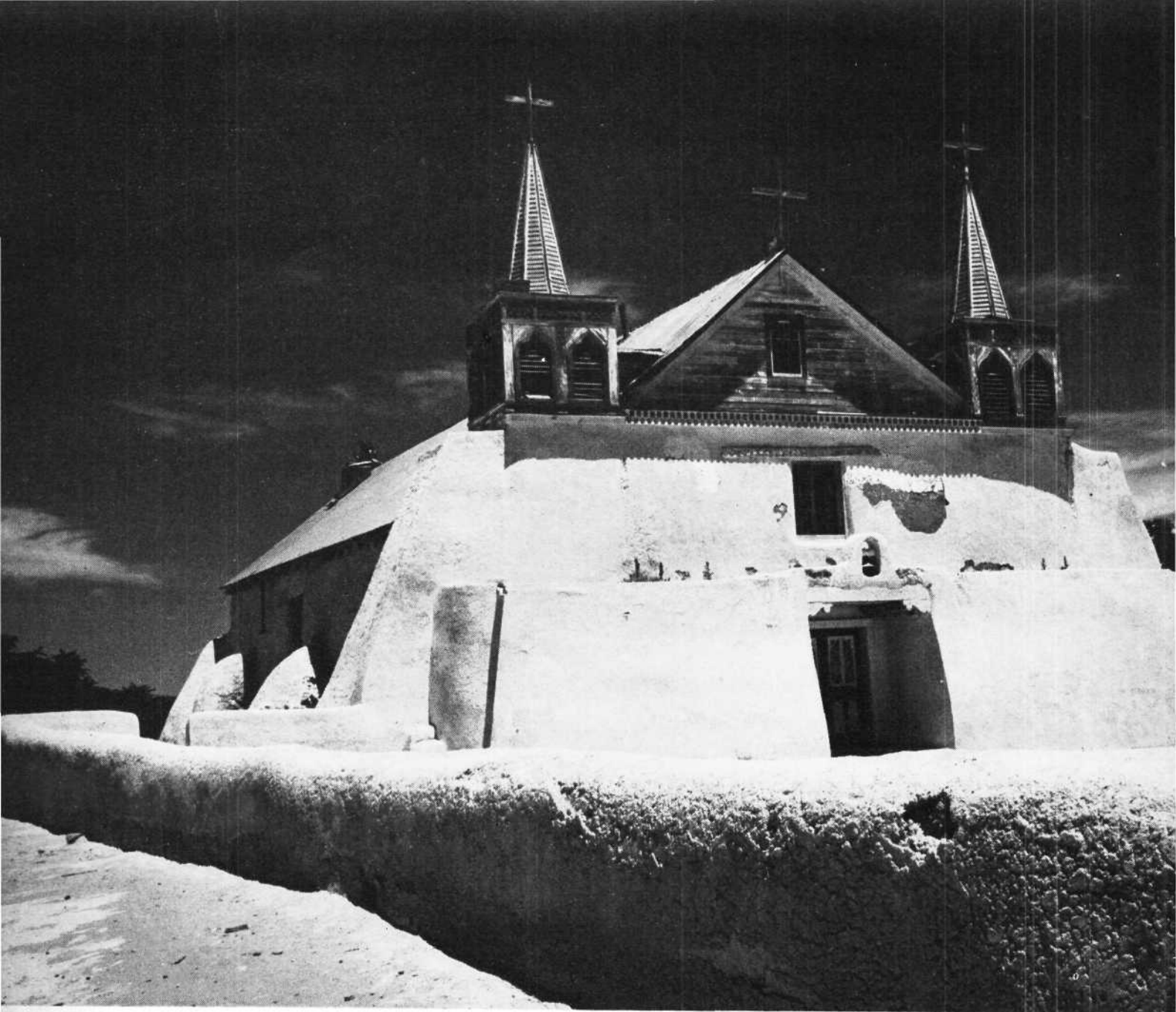
Desert

M A G A Z I N E



FEBRUARY, 1943

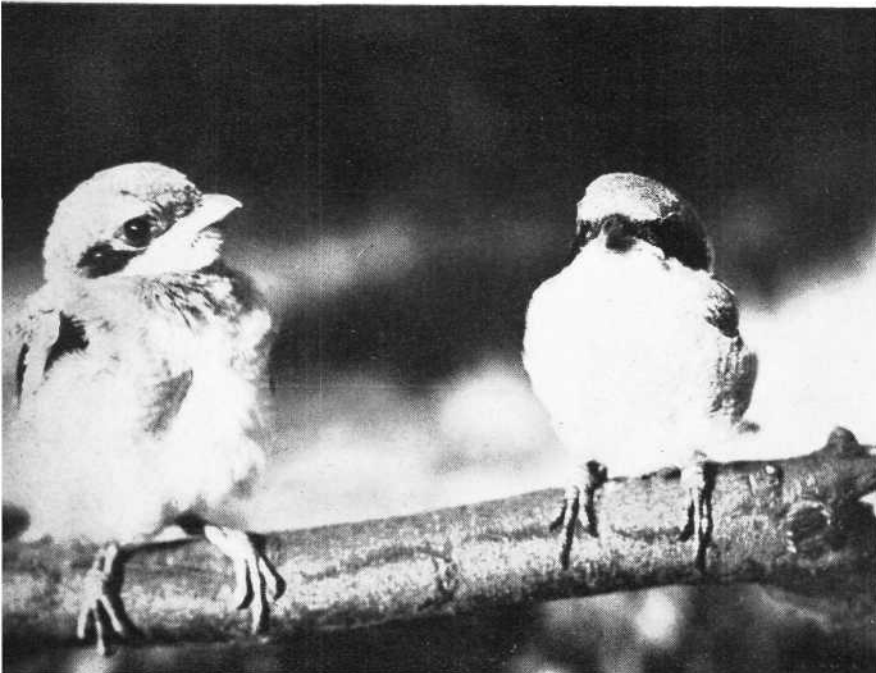
25 CENTS



Isleta Mission

By FRED H. RAGSDALE
San Francisco, California

Awarded first prize in Desert Magazine's December photographic contest. Photo taken with a Rollicflex camera, 1/10 sec., F:22, Plus X film, G filter.



Young Butcher Birds

By JOE ORR
Los Angeles, California

Second prize in the monthly contest was given for this interesting study taken with a 2 1/4 x 3 1/4 Voighlander camera, 1/50 sec., F:16, Panatomic X film.

Mar. 2. 1944

DESERT Calendar

FEB. 2 Candlemas Day dance, San Felipe Indian pueblo, New Mexico.

4 Meeting of the Mineralogical Society of Arizona, Phoenix, Arizona.

15 Turtle dance, Taos Indian pueblo, New Mexico.

18 Meeting of the Mineralogical Society of Arizona, Phoenix, Arizona.

26 Beginning of Lenten rituals of Los Hermanos Penitentes (The Penitent Brotherhood).

DATE NOT SET—New Mexico wool grower's convention, Albuquerque, New Mexico.

Throughout February special exhibition of arts and crafts of all Arizona Indians, Museum of Northern Arizona, Flagstaff, Arizona.

Weather

FROM PHOENIX BUREAU

Temperatures—	Degrees
Mean for December	56.0
Normal for December	52.0
High on Dec. 15	79.0
Low on Dec. 8	35.0
Rain—	Inches
Total for December	0.36
Normal for December	1.00
Weather—	
Days clear	17
Days partly cloudy	7
Days cloudy	7
Percentage of possible sunshine	78
E. L. FELTON, Meteorologist.	

FROM YUMA BUREAU

Temperatures—	Degrees
Mean for December	59.0
Normal for December	55.2
High on Dec. 15	80.0
Low on Dec. 10	39.0
Rain—	Inches
Total for December	0.01
Normal for December	0.49
Weather—	
Days clear	23
Days partly cloudy	6
Days cloudy	2
Sunshine, 91 percent, (283 hours of sunshine out of a possible 311 hours).	

JAMES H. GORDON, Meteorologist.

CREED OF THE DESERT

By JUNE LEMERT PAXTON
Yucca Valley, California

Relentlessly the rain did sweep
Down mountain sides, and canyons—
deep.
And even the sun could not condemn
When it saw new fields of rock and
gem.



Volume 6

FEBRUARY, 1943

Number 4

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—Photo by Cal Godshall.

A GRAIN OF SAND

By CARROLL DE WILTON SCOTT
Pacific Beach, California

It once was part of a granite spire
On a lofty mountain summit,
Harp of the icy winter winds
And a mirror for the maiden moon.
Loosened by frost it fell from the cliff
Where it lay for a score of centuries.
Then a great flood swept it to the sea
And it was tossed by ocean waves
And buried in silt for a million years,
Hardened to stone with an iron stain.
Slowly it rose as the sea-floor moved
Till once again it is part of the land.
And now a brown ant puts it down
In a pile of chaff beside her nest
On a desert plain where I muse.

TO THE GRAND CANYON

By GEORGIA MOORE EBERLING
Pueblo, Colorado

Above your mystic rim a white veil clung,
The rumble of low thunder struck my ear,
While lightning leaped the chasm, and the sheer
Descent to age-old depths was all mist-hung.
It looked as if the clouds chiffon had flung
To hide the brilliant hues (which shine so clear
On sunny days) and mute sounds, so I'd hear
The lovely notes a swift-winged bluebird sung.

So through the ages from the first to this,
As struggling worlds toiled upward from the ooze,

In every age there surely came some bliss
To break the darkness, and new hope infuse.
To me today there came a bluebird's note,
Above curved pits I saw a rainbow float.

Burros

By GRACE CULBERTSON
San Diego, California

Where carnivals erect their curious stands,
A small and sleepy group, the burros stay.
They guard old secrets of their ancient bands,
Disdainful of the parts they play today.
Do they remember how this West was won,
Who followed men to mines and on long trails,
Who knew the desert thirst, withstood its sun,
Brought wood and water, weathered wintry gales?

They keep close counsel who are come to stand
Upon the borders of a pavement age.
If you had known Jerusalem and every land
Since Noah's time, you might appear as sage.
Small burden-bearers of the long, long trail,
Fate grant lush grass and rest in shaded vale.

OLD LOVES FORGOTTEN

By RUTH REYNOLDS
Tucson, Arizona

I know the fragrance of the heather
Wild on the moor in rainy weather.
Of forests dank and rife with gloom,
Of meadow daisies full in bloom.
I know the tang tall pines are sowing
Where a snow-cold wind is blowing.
Wild honeysuckle, cherry, peach—
How lovely is the scent of each.

These fragrances are old loves, all
Answering my heart's recall—
Until the greasewood, wet with rain,
Perfumes the desert air again!

DESERT RAT

By PAUL EMILE MILLER
Plattsburg, New York

I cannot sleep in shack, or palace on the strand;
I need the starlit sky and bed of sun-warmed sand.
I will not be confined by walls—nor understand
The stifling ways of man—I need the open land.

• • •

GO TO THE DESERT

By MYRTLE WRIGHT NACOSKY
Los Angeles, California

Leave all . . . and go to the desert . . .
Uncharted paths have a lure;
She, by her magic will win you
Teach you to know the obscure.

Live there . . . and learn of her secrets,
Watch her mysterious ways,
Fathom the wisdom of silence . . .
Silence that's louder than praise.

Spin all your dreams while you're with her,
Weave them with strands of desire,
Dye them with purple and amber;
Dreams are but prayers to aspire.

Learn from her patience and pathos,
Sternness with which to defend
Peace, you have striven for bravely . . .
Learn when denial's your friend.

Go to the desert and linger,
Seek there for courage and Truth;
Both are the gifts of the desert . . .
Both are the essence of youth.



Ed Ainsworth and daughter Sheila make a find on one of their rock hunting expeditions.

The Greeks Had a Name-- For City Rock Collectors

A large proportion of Desert Magazine readers have come to know Ed Ainsworth through his column in the Los Angeles Times. What they probably did not know until now is that he is one of the most rabid members of the desert rock collecting fraternity—only he has another name for it. Here is the story of how he and his family were lured into a hobby from which there is no retreat.

By ED AINSWORTH

*I*T'S like being a pack rat. Only this pack rat has no conscience. He never leaves anything in return. He just packs—away.

My rock collecting mania—blossoming to its terrifying maturity in the crowded metropolitan area instead of in the open country—has deprived me of a sense of moral responsibility, my leisure time and the companionship of my family and has cost me many of my friends. Still I persist. Gathering rocks has ceased to be a hobby. It is a disease. And I am in the midst of the acute attack.

As such things often do, it started in-

nocently enough. For several decades of my life a rock had been a rock to me and nothing more. My blood pressure remained normal in the presence of a geode. Nothing happened to my pulses when I chanced to glance at a piece of petrified wood. Not even the sight of bloodstone or black lava disturbed my calm.

Then I met some rocknuts at the beach one day (don't worry, this will get to be a desert story in a minute). They were Mr. and Mrs. George L. Barbeau of Laguna Beach. In their yard they had a fantastic array of rocks of all kinds. They called my attention to them. They pointed out big

white rocks with glistening silver streaks, pink rocks, purplish rocks, brown-streaked rocks. Suddenly, as if some demon were whispering in my ear, it became apparent to me that rocks were, after all, of different varieties, shapes, colors and degrees of beauty.

This seemed an innocent enough discovery at the time. That was before I actually started collecting rocks myself.

"How would you like a couple?" the Barbeaus inquired, in what they meant to be a kindly gesture.

They proffered a gorgeous piece of material described as rose quartz and a light-green rock from the sea. Into my car they went and then into the front yard. But they looked rather lonely.

That was what started the trouble.

My wife and I decided that we should find a few other colored rocks to go with them. Even this early, though, we discovered that colored rocks of the quality to be placed in gardens are not to be picked up alongside the main road. The next prob-



It's a family affair—building rock gardens at the Ainsworth home. Left to right—Ed, Cynthia, Mrs. Ainsworth and Sheila.

lem was to locate a good place to go to hunt for specimens.

At first, the desert seemed too far away. We explored nearby canyons before venturing farther afield. The results were disappointing. All the stones in San Gabriel canyon and Big Tujunga appeared to be of one uniformly hideous grey. Not a single hint of gemstone was to be found to relieve the monotony.

Rock hunting apparently wasn't as simple as it seemed.

Next, we consulted an expert, Dr. Carl Sumner Knopf of the University of South-

ern California. He described himself as a "petroller." This he explained was a combination of the Greek word "petras," meaning rock, and the English word "roller" meaning "one who rolls." Hence, we have a "rock-roller," or collecting maniac. This, at the time, seemed to be rather a strong description. Later, it appeared almost inadequate.

Anyway, Dr. Knopf advised trying the dumps of old mines and certain recommended areas in the great Colorado desert. Fortunately, we were entirely unfamiliar with the matter of property rights

at old mines. We meant no wrong. Still, we invaded our first mine dump without benefit of permission from owner or lessee.

It was a gorgeous place, the location of which I shall not specify for fear there may be no law of limitations on the crime of stealing mineral specimens. On the dump there were magnificent chunks of purple stone. On the nearby hillsides there were quartz boulders shot through with pink and purple. We had intended to get only a few little pieces but by the time we had finished loading the car, the body was squashed flat down on the axles and we had to sit on boulders for 130 miles on the way home.

From then on, of course, there was no hope.

We discovered that we had become "petrol'ers" of the most rabid kind ourselves, and that weekends were made for but one purpose—to get more rocks. It was at this stage that we began to appreciate the necessity of mapping definite objectives and setting forth with the proper equipment and necessary man-power to wrest the treasures of nature from cliffs, mountainsides and river beds.

In the beginning, we were concerned mainly with size. Any stone that had a semblance of good looks would appeal to our collecting instincts just because of its colossal proportions. One of our greatest early triumphs occurred on a narrow but exceedingly well-traveled highway, with steep banks on each side, so that it was impossible to get a car more than a few inches off the edge of the pavement. We spotted what appeared to be a portion of a large quartz boulder peeping out from the embankment. With those chortles of excitement and anticipation which mark all genuine rock-collectors, we tumbled from the car and attacked the earth surrounding the edge of the stone. After half-an-hour's digging, we had uncovered a gem of purest ray serene about half as big as a piano box, and weighing somewhere in the neighborhood of 350 pounds.

Anybody with any sense would not have attempted to get it into the car, of course. But, as I have said, we had become rock-collectors. Four of us gathered about the rock and rolled it off the embankment to the edge of the roadway. Because of the embankment it was impossible to open the car door on one side, and it was necessary to roll the giant stone onto the actual pavement where cars were whizzing by in both directions, with barely enough room to pass, anyway. Every time we tried to open the car door, some car would zoom past and nearly blow us down. Then, when the crucial moment came for bending over and heaving on the rock to attempt to get it into the car, we were practically massaged in the rear by each thundering juggernaut as it sped by, with the occupants screaming uncomplimentary remarks into our

Ainsworth home with its wagon-wheel gate on the hillside overlooking Arroyo Seco in Highland Park, Los Angeles.



cars that were already red with strain of lifting.

The fact that we finally loaded the rock is more a tribute to our bull-headedness than to our good sense. At any rate, we transported the monster 38 miles, with it threatening any moment to fall bodily through the car floor. It now decorates our home entry-way, and although brighter jewels surround it, "the big fellow" still retains first place in our sentimental affections.

Naturally, our real mania did not approach its peak until we found what wonders the desert held.

Our first venture into the land of cactus, sagebrush and Gila monsters was hardly one to be recalled with any fond remembrances. It was in November, a bleak and chilly day, when we rolled over Cajon Pass and came out onto that long, flat stretch which beckons to the side-road explorer beyond Barstow.

We had been invited to camp overnight at the desert shack of friends. The evening passed most pleasantly in the warm, one-room house. Then came the question of sleeping. We had only blankets with us, and we were scheduled to sleep just outside the house on the nice, soft desert sand.

When we opened the door about 11 p. m. to go outdoors to retire, it was jerked from our hands by the force of the wind. The wind was beginning to howl and screech, and it had an icy edge to it. We laughed gaily and assured our host that we would be most comfortable with the car to "shut off the wind." Then we started to spread our blankets. They stood out from our hands like a flag in a hurricane. We felt around in the dark for some rocks—we hoped that tarantulas went to bed before 11 p. m.—and deposited them on the lower corner of the first blanket. Then by degrees we deployed the other blankets into place, and while one hardy soul stood outside and held on, the others leaped in and grabbed the blankets before they could blow off. Finally, we all were in a more or less horizontal position, holding on to the blankets with hands and feet, and occasionally being blown half upright as the covers bellied out like a mainsail in a sou'wester.

Then, too, in about an hour it seemed that not sand but all the rocks in the desert were underneath us. We writhed and gripped the sailing covers.

The sand was blowing, too, by this time, and it was necessary to keep one's eyes closed, although sleep was out of the question. At about 12:45 it started to rain and sleet, along with the wind. This was too much. We arose, and adjourned to the house, where we all put our blankets on the floor in a row, built a roaring fire in the wood stove and had a big cup of strong "squaw tea." That floor was the softest, downiest and most comfortable bed upon

which I have ever slept, after the bumpy sand and the wind.

The next day we went jasper hunting, our night's woes forgotten. Jasper sounded particularly alluring because of the many references to it in the Bible, and the promise that the streets of heaven were going to be paved with it. Naturally, no rock collector—with the deteriorating conscience that always goes with the hobby—could expect to investigate the streets of heaven in person, so we were exceptionally pleased to get a chance at it in this life.

At a certain spot a certain number of miles beyond a certain landmark, (how we rock collectors do trust one another!) we were told to alight from the cars and start looking. Immediately, the loud cries that began to arise indicated the presence of a rich strike. The whole flat face of the desert at this point was an alternate succession of greasewood and chunks of jasper—big, red-orange-yellow treasure-blocks of it. We gathered and gathered while learning that it was one sequel of volcanic ac-

tivity. Then, when the groaning car could hold no more, we set off to investigate the possibility of the yellow and red hills at Calico, the ghost-town across the great valley. But Calico's rocks all were soft and crumbly, and we went home that time with only the heavenly jasper, which seemed satisfying enough in itself.

All expeditions are not so gratifying though. Into every rock collector's life some gloom must come, some disappointment must poke its way.

We had heard about bloodstone. It sounded exciting and colorful. We envisioned great masses of blood-red stone, waiting to be transported to a new home. So when John Hilton, the desert artist and gem-expert, offered to guide us to a great bloodstone deposit, we packed up and were on the way.

Far into the hills we penetrated that day, across miles of bumpy desert car tracks, across storm-scoured washes, by yellow palo verde trees and the pale lavender blooms of the leathery ironwood, up

This old wagon wheel is one of the souvenirs Ed Ainsworth picked up in his trips on the desert.



a huge arroyo, past outcroppings of white onyx, with the temperature all the time around 118 degrees, and the air pulsating with the heat. Finally, the desert truck encountered big grey boulders of a size which not even it could surmount.

From then on we had to walk. On and on we trudged, carrying the small canteen and buoying ourselves up with the bright vision of the gorgeous bloodstone waiting for us ahead. On the way, we investigated some baby geodes which were scattered around like miniature cannon-balls, but the bloodstone was the lure that kept us going.

At last the goal loomed ahead, and Hilton pointed out where the outcroppings were to be found.

Wiping the sweat from our eyes, we all dashed forward, and then turned around in dismay. Before us were some sickly green hunks of shale-like rock with what appeared to be dirty brown smudges on them.

"Where is the bloodstone?" we demanded, as well as our parched tongues would permit us.

"This is it," Hilton explained jubilantly, as he enthusiastically picked up a piece of the rock and licked it. Thus caressed, the rock proved to have some dark-red markings in it, about the color of a rotten tomato.

Hilton explained that it would polish up beautifully, but this couldn't do away with our disappointment. We had wanted big blood-red rocks and there weren't any. Bloodstone was a washout, so far as we were concerned. Somehow, nature seemed to have left most of the red corpuscles out of it.

Just to top things off, I managed to spill the water out of the canteen. It was about 14 miles to the nearest water, the first two of it a hike back to the truck. By the time we got there our tongues were too thick for conversation, so we just headed down the arroyo as fast as we could go. Each moment our mouths became dryer, and our throats more like sandpaper.

It was a well for which we were heading. When we got there, we tumbled out of the truck and dashed to the bucket. This was a rusty tin can on a wire, which let down into a fluid about the color and consistency of a weak, chocolate malted milk. It was called water.

With us we had our 6-year-old daughter, who had always drunk boiled water from a sterilized cup. But now she got the first drink from the well, algae and all.

The water, etc., was warm, but it was at least liquid enough to go down. And it tasted better than the finest boiled, filtered, and chemically-treated artesian water, with a city health pedigree attached.

But if the bloodstone was a washout so far as we were concerned, Hilton has more than made up for it since.

With him, we have obtained giant gyp-

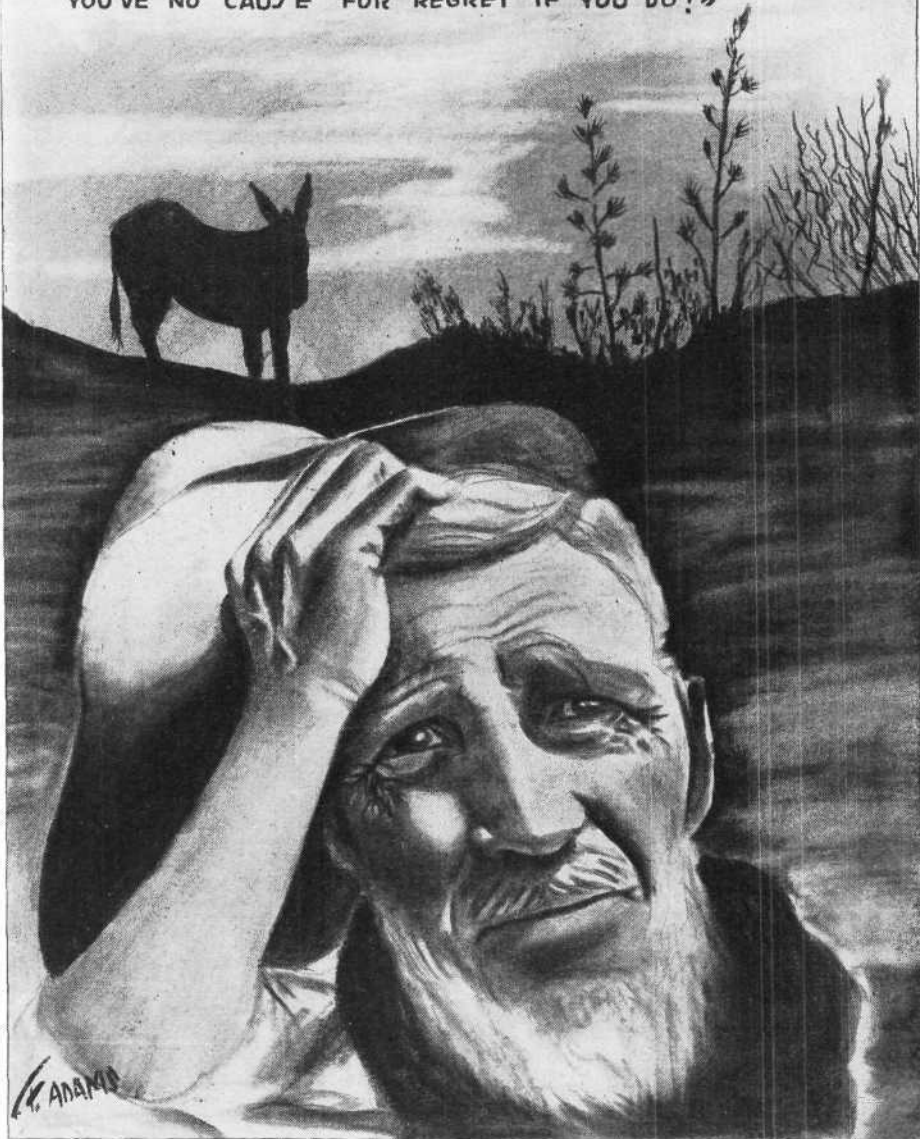
Desert Philosopher . . .

SOLILOQUIES OF A PROSPECTOR

Drawing by Frank Adams

Text by Dick Adams

"WHEN YOU'RE TROUBLED WITH PROBLEMS TOO WEIGHTY TO SOLVE
AND THE WORLD SEEMS SLIGHTLY ASKEW;
GO ALONE TO THE DESERT AND THINK MATTERS OUT—
YOU'VE NO CAUSE FOR REGRET IF YOU DO!"



sum crystals, some weighing as much as 80 pounds, from Lake Mead, pea-green copper straight from the innards of a mine in Mineral Park, Arizona, blue-agate geodes, lodestones, and many others that now have "moved to the city."

The editor of the Desert Magazine, too, has led us to the lair of those famous pinto-stones that look like layers of caramel candy, gorgeous weathered white marble and to the region where California's own diamonds are found.

We long ago ceased to have any moral scruples. We figure, now, that if the Creator made a beautiful rock and it somehow got on a mine dump and there is nobody around—well, what do you expect? It

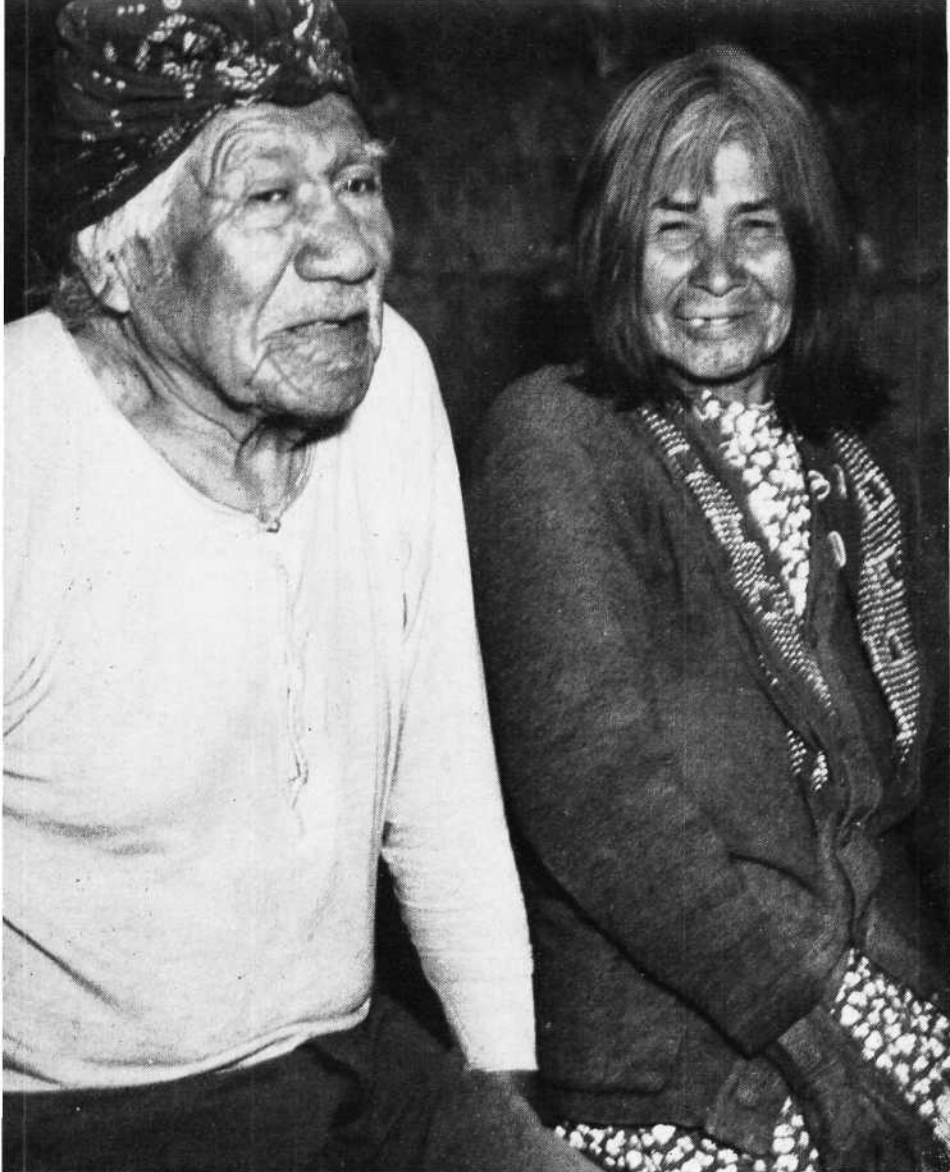
isn't really stealing. It's just giving a lonely orphan rock a loving home up on our hill in the city.

Friends like Jack Warner of the desert far above Mojave, who lives amid rainbow-hued stones gathered from everywhere, are kind enough now to provide plenty of new fields in which to search.

Of course, it would be nice to live right out in the desert where you could hunt rocks all the time. But the next best is to make foraging expeditions from the big city.

After all, the desert isn't so awfully big.

Maybe we can move it all in, before we get through.



Older generation of Mojave Indians seldom allow themselves to be photographed because of traditional tribal taboo.

Mojaves and Their Next Door Neighbors

By MARGARET STONE

"**W**HAT do you think of having the Little Brown Brothers on your reservation?" I asked an old Mojave Indian who was loafing in the noonday sun. I had gone to the Colorado River agency to learn firsthand how Indians regarded the Japanese now located at Poston.

"I don't like. Government take our Indian boys across the ocean to kill Japs. Government bring Japs to our reservation and say we must not kill them!" That was the sum total of his opinion and gifts of candy and cigarettes failed to coax additional remarks from him. Already I had

learned that there would be no actual contact between the Indians and Japanese. When it was decided that 20,000 Japanese should be placed on the Colorado reservation my first reaction was consternation. What would it do to the Indians.

The Mojave's love of his homeland once proved a powerful obstacle to white men coveting that country. The journey of pioneers and explorers often ended abruptly and with finality once they reached the wastes of the Colorado river where the Mojaves have lived since the discovery of the Southwest. This tribe was once the largest and most warlike of all

Flash of Lightning and his wife High Heaped Clouds approve the government's relocation plan. When thousands of Japanese evacuees began to arrive in the new town of Poston, established on a portion of their homeland in the Colorado River Indian reservation, most of the Mojave Indians—and many of their white friends—viewed the move with misgivings. But now Flash of Lightning regards this solution of an emergency problem with tolerance—and with the belief that this temporary imposition will bring to the Mojave Indians the aid they have heretofore sought in vain.

the Yuma Indians and they fought with deathlike tenacity to save their homes from all comers. Barren and arid and desolate as that country looks, they have managed to survive famine and war and civilization. About 800 are left in the once powerful Mojave nation. They have small fields in the Colorado river bottom and raise a little grain, beans, corn and pumpkins, and here and there have a small cotton field. They work for the big cotton growers and pick cotton swiftly and without waste.

After digging an existence from the desert for centuries they saw their land made fertile by the completion of Parker dam in 1939. That stored water would bring life to 100,000 acres, much more land than the Mojaves could ever work. There was a thought of going ahead with the development and making the excess acreage available to poverty-stricken Indians of other tribes, but the Navajo and Hopi and some New Mexican tribes went down and looked it over and chose to remain in their own homelands. The government, however, seeking a safe place for Japanese during the war could find nothing wrong with this location.

I left the old man smoking my cigarettes and drove across the desert to a miserable shack belonging to a very old Mojave. His name was *He-re-in-ye*, Flash of Lightning That Comes With the Clouds. His wife had a slightly less imposing title, High Heaped Clouds. Even the very names of this desert tribe seem to implore life giving moisture from the skies. With them was the younger wife of their son and she seemed glad to have a visitor. She was a Sherman graduate and really beamed when I gave her an armful of magazines. Life must be drear for the younger members of the tribe.

Flash of Lightning was quite willing to talk about the alien visitors in his land and with the help of Marriane, the daughter-in-law, we understood each other very well.

"As I grew old I saw my land become

more and more worthless and dry, while the water ran down to the ocean by our parched fields. I saw the young men leaving the planting and going to work at Needles for the railroad and on ranches where white men had water ditches. It was a great time when the government built a dam and stopped the water from leaving us. Oh, if I were a young man now what beans and corn and cotton I could grow. I am too old to dig in the fertile fields now." He paused and mentally reviewed the years he had toiled for such little gain.

"Are you displeased that the Japanese are here to live?"

"No. Already I have lived long enough to know that there is good in everything. Also I have learned that what the government plans to do for the Indians can wait. No money, no money, they say. When the dam was built, little land was cleared for planting. Few ditches to carry the water were dug. The water went on to others because we had no way of using it, and we were forgotten once more while we used the small fields the best we could.

"But war came and the enemy must be put somewhere! No white man would give up land. But there was Indian land waiting. No water? Plenty of water in the dam. Spread it over the land. Take big machines—tear out the sage and cactus and yucca and make ditches for irrigation. That takes money and 'no money' we were told.

Oh, but money when war is here. It is all right. Water will run through the ditches into the land, cleared fields will still be there when the Japs have gone back to their fishing and flower growing. Maybe Mojaves have watered fields then."

The old wife nodded her head as she listened and the son's wife added her opinion.

"At least we can't be worse off than we were before the Japs came. We don't see them or have to live near them. When the war is over our young people will have those cleared fields to begin living on and they can raise cotton then instead of picking it for white people. We could do nothing by objecting to the Japs. What has an Indian's protests ever mattered. We will make the best of it!"

The sun was almost down and I asked permission to camp near their home. They were very gracious about it and after my supper was over I walked across to sit beside their fragrant sagebrush fire built in front of the house. Even in that desert country there was a chill when the sun went down and there is always something about an outdoor fire that draws me.

The house was crudely made of railroad ties, roofed with brush, the south side entirely open. There were no beds except quilts and cotton blankets which were spread on the dirt floor at night and rolled into a tight bundle and set in a corner during the day. The chairs were packing

boxes from a trading post and the three Indians sat on them holding their enamel plates on their laps while they ate the stew of meat and beans sopped up with fried bread. I had watched the girl cook the bread over the outside fire. I added a can of tomatoes to their fare and sealed our friendship.

"Do you make any baskets or pottery?" I asked.

"No baskets now. Once we made big willow baskets to hold mesquite beans and dried corn and beans but we don't make them now. And since we can buy pans and jars at a trading post we do not make pottery. Our clay was not good for it. About all we used our pottery for was to cook in."

Marriane, a name doubtless bestowed on her at school, went into the shack and brought out her beadwork. The Mojaves make hatbands, bags and woven necklaces of bright colored beads sewed on tanned leather and that is their only craft as far as I could learn. That accomplishment must have been taught them at the boarding schools.

"Well, if you don't make baskets or pottery, what do you do?"

"Sometimes we make dresses for the Mourning day," High Heaped Clouds took charge of the conversation at that point and her eyes sparkled with memories of that ceremony. She gave me this version of it.

"Once a year we have a gathering and

A Mojave Indian teaches children in an outdoor Sunday school class using pictures, which are more easily understood. Tribal members are guaranteed right to worship as they please. U. S. Indian Service photo.



all mourn for the ones that died since last year. That is when we honor *Mas-Zam-Ho*, King of Departed Spirits. Then we women have a good visit together.

"Once it meant that we went into the Cry House and just really mourned, but now we have dances and feasting and we play cards and the horses race. My man collected money from all his white friends last year and when we built the Mourning House it was very nice. It was hung with bright cloth and bunting and colored paper and had a Navajo rug in one place."

"What is it all about?" I wanted to know.

"Mojave people cremate their dead. If they don't the spirit comes back in the shape of an owl and hoots all night on the house top. We build a big shelter to dance in and a small one to cook food in on Mourning day.

"In the middle of the morning relatives of Mojaves who have died since the last feast line up in a row and wail for a time. Then the feast is served, and everybody stops wailing to eat. Then in the afternoon is the card playing and horse racing. All the time the mourning women are honored guests. Their mourning dresses are very long and full with long sleeves. They are black and for a foot or two from the bottom are decorated with narrow bands of bright ribbons and lace.

"When evening comes six or eight strong young men are chosen to dance. If one stumbles in the dance it means lots of sickness and trouble for our tribe. They carry red and white willow wands and they dance toward the east several steps. Then they rest and touch the earth with the wand. They turn, place the wands over their shoulders and trot back to the starting place, and this goes on until the sun begins to show in the eastern sky. Then they stop and the two houses are torn down and piled in a heap. The black dresses are taken off the mourning women and put on the pile and something that belonged to each mourned dead is added. Then it is lighted by the dancers. They must stay beside the fire until the ashes are grey and cold because the spirits of the mourned are there to watch and they would be offended if they found the fire unattended."

The other Mojave deity is *Mat-o-we-lia*, Maker of All Things. He created the Colorado river and then placed land around it to hold it in place. Then he separated darkness from daylight and taught the Mojave people how to raise their food in the river bottoms. Many times he has saved them from floods and famines.

"*Mat-o-we-lia* made the Colorado river for us, the Japs may use it for a time, but it will always belong to the Three Mountain People." Grandfather Flash of Lightning That Comes With Clouds put a period to the conversation with that statement.

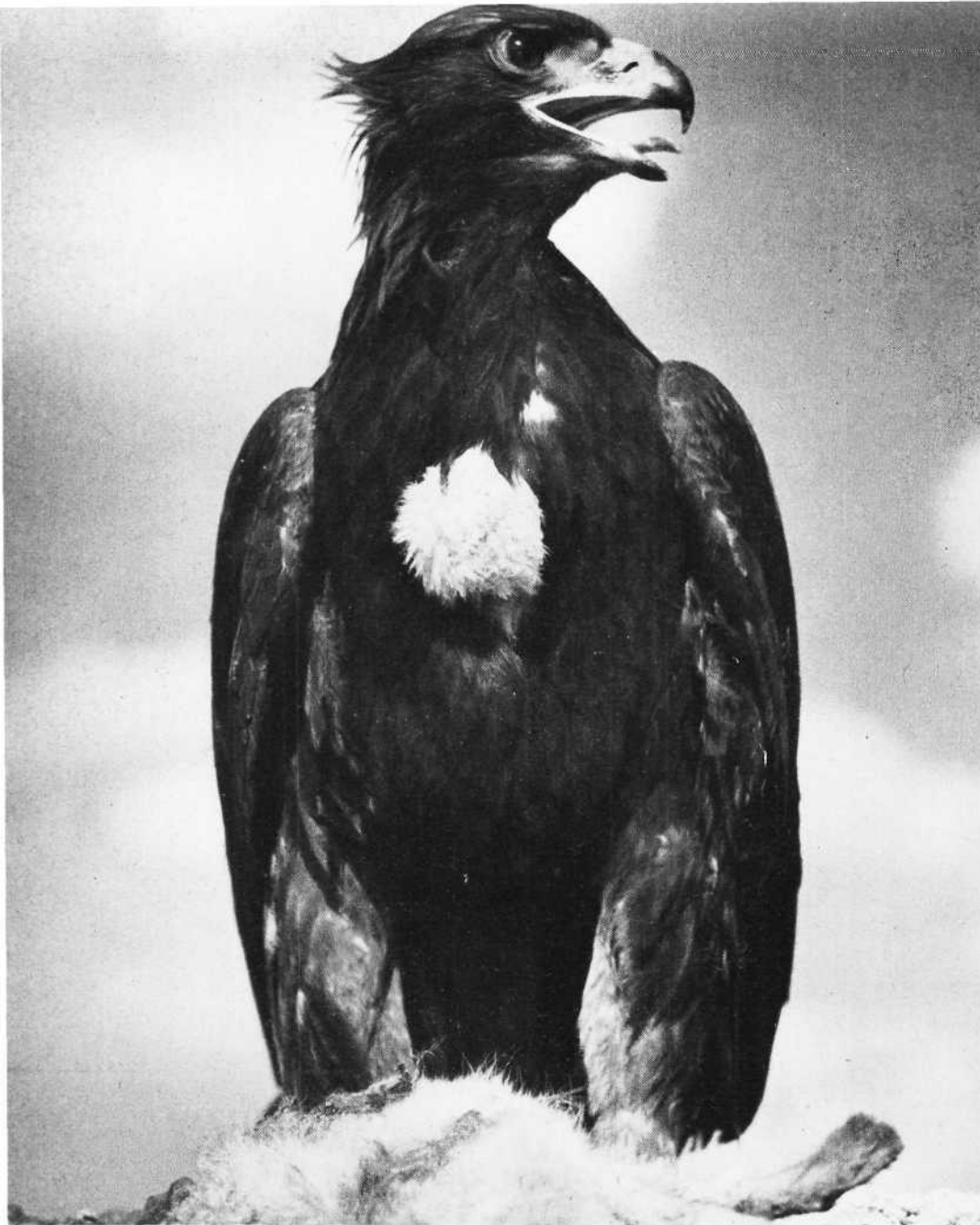
FEBRUARY, 1943



Clothes vary from modern styles found in stores today to the long flowing cotton dresses which white women wore during frontier days. U. S. Indian service photo.

Once most warlike of the Yuma Indians, the 800 members of the Mojave nation are today predominantly agricultural. U. S. Indian service photo.





With the fierce desert sun gleaming on his magnificent golden head he was every inch the king of birds.

EARLY last April my wife and I were exploring a deep and rocky canyon in the hope of finding a favorable spot wherein to look for Pocket mice. We needed a photograph of one of those tiny desert creatures to complete a series on nocturnal rodents.

Working along the canyon's northern wall we happened upon a large and mysterious pile of dead sticks and dried sotol leaves. As it was quite unlikely that an animal, even one as large as the industrious pack rat, could have collected such an impressive amount of desert debris we began looking about for some other explanation for its presence. After carefully examining the canyon floor with no results we searched the cliffs above with our field glasses. After much scanning of rocky walls and pinnacles we finally were able to make out a large dark mass of coarse sticks on a narrow ledge a good 100 feet above us.

So much did our strange find look like a giant nest that we decided to forget Pocket mice in favor of a little reconnoitering. Hurrying up the long canyon and back over a rough ridge we managed to gain a point directly above the ledge. On looking over the cliff-edge we were delighted to see that we had indeed found a nest, and a far from empty one at that. On a bed of desert spoons lay two great eggs. We had discovered the secret eyrie of a pair of Golden Eagles!

Since we had failed to bring climbing ropes we were forced to admire nest and eggs from our lofty perch 40 feet above them. Through our glasses we could see them clearly. They looked about as large as good sized turkey eggs and were beautifully marked with bold chestnut and purple blotches. The adult eagles would incubate these precious, life-filled eggs for a whole month before the young would be strong enough to break their prison walls

George Bradt roped down a precipitous cliff wall to the secret eyrie of a pair of Golden Eagles. Suspended 140 feet above the cactus-studded desert floor, he observed and measured the occupant—an appealing little fellow who looked far more like a child's fuzzy toy than the offspring of majestic eagles.

Golden Eagle's Eyrie

By GEORGE McCLELLAN BRADT

and put an end to their long and solitary confinement.

Not wishing to keep the parent birds too long from their nest we took a final look at the eggs and started back to the car. But instead of returning the way we had come we kept to the high cliffs in order to pick out a route that would enable us to approach the nest unobserved. We wanted to be sure of catching at least a glimpse of the shy adult eagles on our next trip.

Three long weeks passed before we were able to revisit the exciting nest-site. When we did head for the hills again we took plenty of one inch cotton rope, our cameras, and a friend and fellow photographer, Sgt. Grattan English, who was to give us much valuable aid in climbing and picture taking.

By following the previously marked route along the cliffs we managed to reach our observation post apparently unobserved by either of the adult birds. But before looking at the nest and its occupants we cautiously examined the heights above to determine whether one eagle at least was not standing guard. It was lucky indeed that we were so careful. Perched on a jutting crag across the shadowy canyon was the male eagle. With the fierce desert sun gleaming on his magnificent golden head it was easy to understand why the eagle is called the King of Birds.

Hoping that the gilded sentinel would

not see us and give the alarm we quietly peered over the edge of the cliff. On the nest, completely unaware of the three pairs of fascinated eyes focused upon her, sat the mother eagle. She was gazing intently out over the rolling desert that lay like a dust-green sea far below her. From time to time she would poke her head beneath her breast and, almost as if talking to herself, make a soft clucking sound. Immediately, however, she would be answered by a high, thin chirping that came from some quite invisible source.

We were at a loss to explain this strange conversation until one of us inadvertently loosed a small pebble. It struck the edge of the nest and startled the brooding bird. She looked up, saw us, and quickly flew from the nest to join her mate on the far side of the canyon, from which point they watched us with their marvelous, far-seeing eyes. But we were far too engrossed in what the mother bird had left in the nest to worry about what the parents might be thinking. On the rough lining of the nest lay a tiny white body. It was a baby eagle. Even from our distant perch we could see its little outspread wings, black beak and blacker eyes.

Impatient to view the eaglet at closer quarters I began uncoiling the rope. But before this job was half completed Grattan stopped to ask me if I were not afraid that the adults might attack anyone trying to reach the nest. It took some minutes to assure him that eagles, while powerful and fearless, have a healthy respect for man and unless wounded or captured have seldom if ever been known to attack a human being. I also took time at this point to explain to both Grattan and my wife that eagles do not carry off babies, nor, in fact, are able to lift into the air anything weighing over eight or nine pounds. This done I finished straightening out the rope, constructed the climber's "Spanish bowline," and made it fast about my legs and waist. Grattan found a large and well embedded rock and tied the rope to it. Then, while he paid out the rope, I began working myself slowly backward over the cliff.

The first few feet were the hardest. I could not help looking downward at the cactus-studded desert 140 feet below me. But the stout rope in my hand and the excitement of the descent soon made me forget the dangers of my job. After a breathtaking quarter of an hour of feeling out shallow hand and toe holds, and trying not to loose stray rocks upon the eaglet's head and mine, I reached the nest. I then signalled Grattan for some slack and knelt to examine the baby eagle.

The appealing little fellow looked far more like a child's fuzzy toy than the offspring of the majestic eagle. Except for a few black, blood-filled quills in wings and tail it was completely covered with thick white down. Its large, but very weak, yel-

low feet were tucked beneath its fat, rabbit-filled crop. The entire time I remained in the nest it kept its beady black eyes fixed upon me. But it seemed not at all afraid or concerned about my presence in its almost inaccessible home. There was no sign of the other egg. Perhaps it had proved infertile. Or perhaps the eaglet had hatched but subsequently died and been removed by the parents.

The nest, that the little eagle would call home for some eight weeks to come, was a tremendous affair. It measured three feet by four, and was more than three feet thick. Several men could easily have stood upon it. An eagle's nest assumes such startling proportions because the young need plenty of wing-room and because a pair of eagles, mated for life, use the same nest-site year after year. Instead of building a new home each spring, as do most

birds, they merely add new sticks and lining to the old one.

Before stepping onto the nest for the first time I hesitated for some moments fearing that beneath my weight it might give way and send the baby eagle to its death on the rocks below, and me to the end of the rope. But after testing it carefully I found that there was no danger of its collapsing. I could even stand on its outer edge, which protruded a good two feet beyond its supporting ledge, so strongly interwoven were the sticks which formed it.

When I finished examining and taking close-ups of the eaglet, Grattan, with a long-focus lens on the camera, "shot" the nest, its eagle-inmate, and strange soldier-visitor. Before leaving I picked up the little bird to see how heavy it might be. While it could hardly have been more

With a long-focus lens Sgt. English "shot" George Bradt as he was examining the eaglet and its home.



than 15 or 16 days old it weighed over two pounds. From beak to end of short tail it measured about 13 inches; its wing-spread was approximately two and one half feet. Quite a bird!

After Grattan had taken the picture I signalled that I was coming up. It was good to get on solid ground again. Rope and sturdy nest notwithstanding, the climbing and dizzy heights had left me a bit shaky. But the indescribable thrill of observing first-hand the home life of the Golden Eagle was well worth all the effort and dangers involved. We packed up our gear, waved farewell for the present to the baby bird, and headed for home.

During the following eight weeks, each Sunday afternoon, we climbed the rocky and snake-infested slopes to photograph and study the progress of our little friend. By the time it was a bit more than four weeks old it had acquired numerous black feathers on wings, body and tail. Within two more weeks it had learned to stand surely on its great, sharp-taloned feet, and had grown strong enough to tear its own food which consisted almost entirely of jack rabbits and ground squirrels.

Early June saw it fully fledged from tip of black, white banded tail to golden head-dress. It spent the long summer days on the nest-edge flapping its tremendous wings in preparation for the day on which it would leave its mountain eyrie. Finally, one sunny morning, it spread those seven-foot wings and glided from the nest. For a few days the parent birds would watch to see that the new and inexperienced hunter found enough to eat. But soon it would become expert at capturing the destructive rodents that form the greater part of the eagle's diet and would be left to make its way alone. And the desert would be richer by one Golden Eagle.

TRUE OR FALSE

We cannot follow the desert trails as frequently as in former days—but that is no reason why we should let our desert

knowledge become rusty. And so Desert Magazine's quiz goes on month after month, partly to recall pleasant memories of former trips, and partly to keep alive your contact with this land of peace and courage. Here are 20 questions covering a wide range of desert subjects. The average person will not answer half of them correctly. The desert rat may get 15—and none but a super-student of the arid region and its geography and history and lore will exceed that number. The answers are on page 32.

- 1—The greasewood or creosote bush that grows on the desert is a perennial shrub. True..... False.....
- 2—The bite of a chuckawalla lizard sometimes proves fatal. True..... False.....
- 3—The blossom of the desert smoke tree is white. True..... False.....
- 4—The Hopi Indian reservation in northern Arizona is entirely surrounded by the Navajo reservation. True..... False.....
- 5—Visitors at the Petrified Forest national monument are permitted to pick up and take away specimens not exceeding four ounces in weight. True..... False.....
- 6—The state flower of New Mexico is Yucca. True..... False.....
- 7—Cochise was an Apache Indian chieftain. True..... False.....
- 8—The Great White Throne is in Zion national park. True..... False.....
- 9—The Mojave river of California is a tributary of the Colorado. True..... False.....
- 10—Juan Bautista de Anza was accompanied on at least one of his treks by Father Garces. True..... False.....
- 11—Calcite is harder than rose quartz. True..... False.....
- 12—Esteban, who accompanied Marcos de Niza on his quest for the Seven Cities of Cibola, was killed by Yuma Indians. True..... False.....
- 13—Pyramid lake in Nevada derives its name from a pyramid-shaped rock near its shores. True..... False.....
- 14—Joseph Smith, founder of the Mormon church, never saw Utah. True..... False.....
- 15—Records now available indicate that the prehistoric sloth which lived in the Southwest, frequently invaded Indian camps in quest of food. True..... False.....
- 16—The Kaibab squirrel is found in the Kofa mountains of Arizona.
- 17—The atlatl was a tool used by Papago Indians to harvest fruit from the Saguaro cactus. True..... False.....
- 18—Staurolite crystals, sometimes called Fairy Crosses, are found in New Mexico. True..... False.....
- 19—The book "I Married a Ranger" was written by Ruth Underhill. True..... False.....
- 20—Carlsbad caverns were once inhabited by prehistoric Indians. True..... False.....

Amateur Photo Contest...

Each month the Desert Magazine offers cash awards of \$5.00 and \$3.00 for first and second place winners in an amateur photographic contest. The staff also reserves the right to buy any non-winning pictures.

Pictures submitted in the contest are limited to desert subjects,

but there is no restriction as to the residence of the photographer. Subjects may include Indian pictures, plant and animal life of the desert, rock formations—in fact everything that belongs essentially to the desert country.

Following are the rules governing the photographic contest:

- 1—Pictures submitted in the February contest must be received at the Desert Magazine office by February 20.
- 2—Not more than four prints may be submitted by one person in one month.
- 3—Winners will be required to furnish either good glossy enlargements or the original negatives if requested.

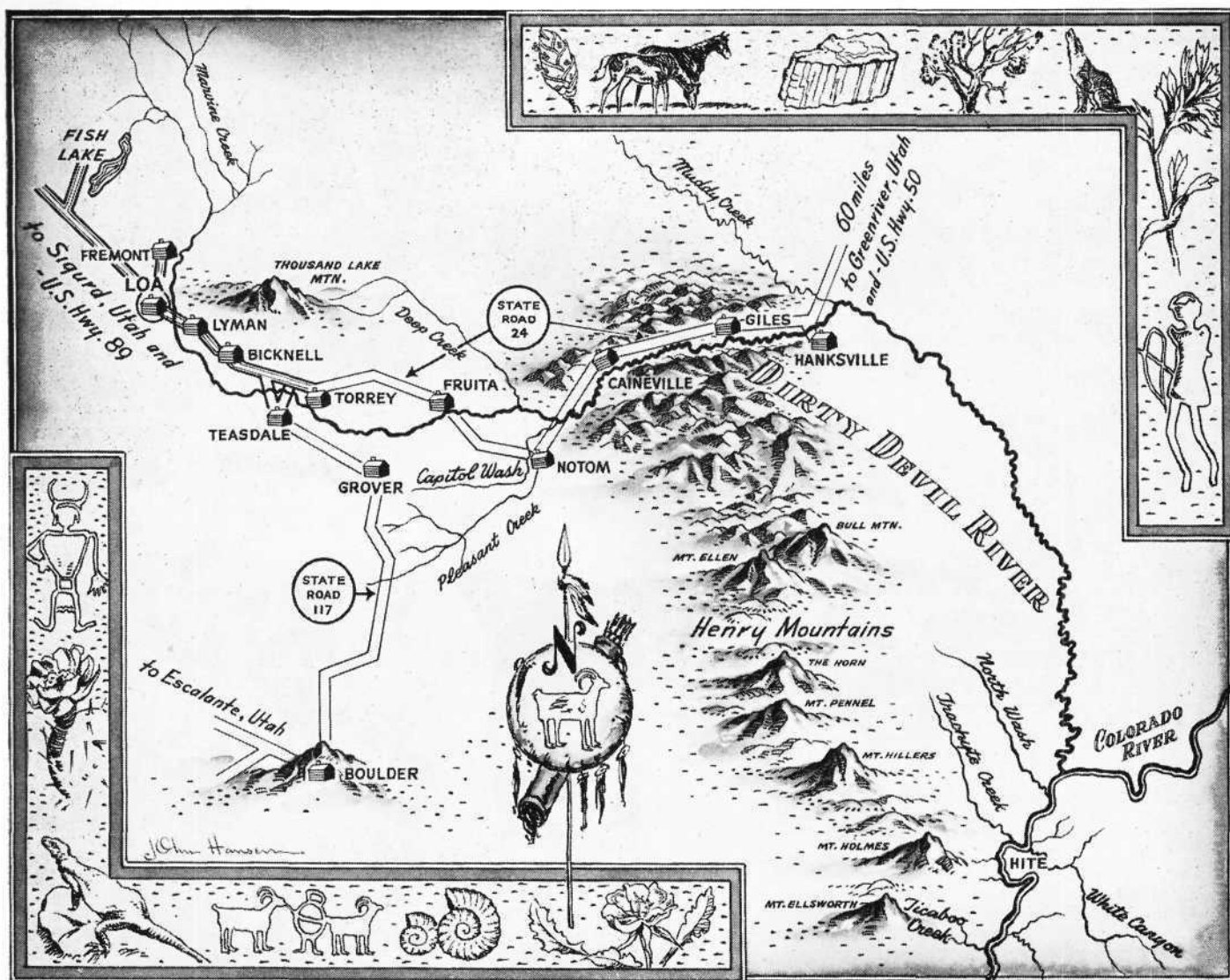
4—Prints must be in black and white, 3¼x5½ or larger, and must be on glossy paper.

Pictures will be returned only when stamped envelopes or photo-mailers are enclosed.

For non-prize-winning pictures accepted for publication \$1.00 will be paid for each print.

Winners of the February contest will be announced and the pictures published in the April number of the magazine. Address all entries to:

Contest Editor, Desert Magazine, El Centro, California.



Dirty Devil--

THE SAGA OF A RIVER

By CHARLES KELLY

WHEN Major John Wesley Powell reached the lower end of Cataract canyon on his first expedition down the Colorado river in 1869, he found himself short of supplies.

Much of the flour carried in his small boats had been ruined by water and his bacon had spoiled. His men were weary and hungry. After passing through the dangerous cataracts and into the quiet waters of upper Glen canyon they hoped to find some clear mountain stream entering the Colorado where they could fish for

trout to replenish their supplies and supplement their monotonous menu.

As they emerged from Narrow canyon they were delighted to observe an opening in the canyon wall indicating a tributary stream. As the leading boat approached the opening a man in one of the rear boats shouted:

"It is a trout stream?"

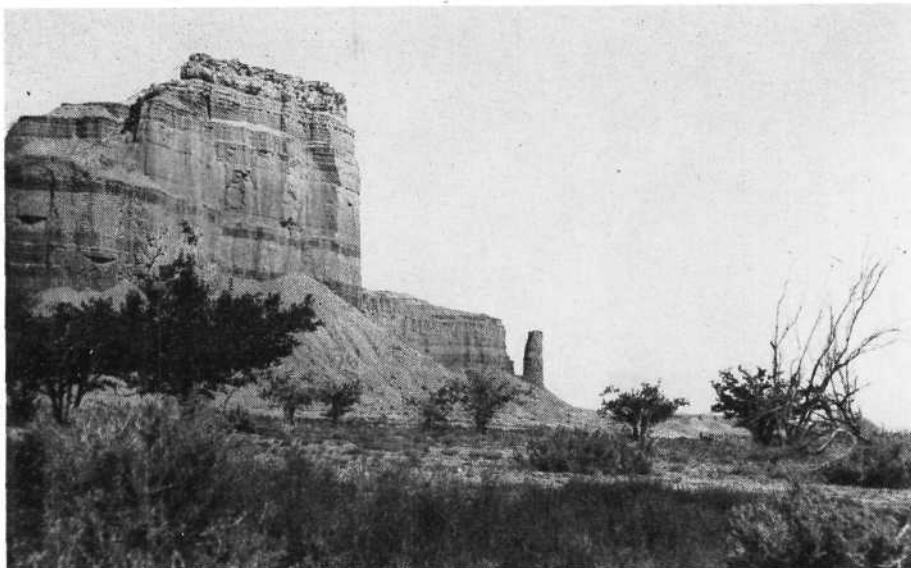
Dunn, in the lead, took one look at the water rolling out of the tributary, which was even heavier with silt than that in the Colorado, and shouted back:

When Dunn shouted back to Major John Wesley Powell that the tributary ahead was no trout stream but "a dirty devil," members of that Colorado river expedition in 1869 probably did not realize how well it was named. Although it later was officially designated the Fremont river, the first epithet clung to it. Both its appearance and its actions during the following generations matched its name, as many a Mormon settler who battled with it can testify. This is the story of a river and its vagaries—and the people who tried to make their homes along its shifting course.

"No! It's a dirty devil!"

That's how the Dirty Devil river of Utah got its picturesque name. In later years Powell officially designated the stream as Fremont river, but the old name stuck in spite of him. How well it deserves that name today is the subject of this story.

The Dirty Devil river, in southeastern Utah, has its source in Fish lake. After dropping down from high Fish lake plateau it passes through a canyon to the little town of Fremont, then through an open



Dead orchards mark the site of once comfortable homes along the Dirty Devil.

valley to Grover, where it enters another deep canyon.

At Fruita, five miles below, it dives into another canyon for 13 miles, having gouged a channel through Capitol Reef. Just a short distance above the old settlement of Cainesville, it enters a flat alluvial valley from one to two miles wide, which continues for about 25 miles to Hanksville. Below the latter settlement it continues through another long, deep canyon to the Colorado. Its total length is about 200 miles.

At the time of Powell's first expedition in 1869 there were no white settlements anywhere along the Dirty Devil. Hanksville, the oldest settlement, was founded in 1880 by Ebenezer Hanks as a hideout for Mormons who wished to practice polygamy unmolested by the law. He could not

have selected a safer spot. Located in the heart of the roughest kind of broken desert country, no United States officer ever interfered with the Mormons.

In those days the Dirty Devil above Hanksville meandered peacefully through its long, narrow valley, its banks bordered with a thick growth of willows. Its channel was not more than a dozen steps wide and it could be waded almost anywhere. It required but little effort to run irrigation ditches with a plow and construct diversion dams of rocks and willows and put water on hundreds of acres of flat land. The red alluvial soil proved rich and it was easy to plow and cultivate.

Within a short time more settlers began moving down along the Dirty Devil. A settlement called Cainesville was started at the upper end of what the pioneers called Blue valley, and another called

The Dirty Devil above Hanksville. In pioneer times it was a small, meandering stream and this valley was dotted with fertile farms.



Giles was later founded between the two older settlements. Good homes were built, orchards planted, and the banks of the Dirty Devil began to take on an air of prosperity. Each rancher owned large herds of cattle which grew fat on the wild grasses of the surrounding desert.

Pioneer Mormons were industrious farmers. As the valley filled with settlers they began clearing away the dense growth of willow brush along the river to make room for more crops of corn and hay. In places the stream's meanderings interfered with their ideal of wide, square fields, so they plowed new channels to straighten its course. At the next flood season the river obligingly followed those new channels. But as time went on it seemed almost too eager to follow a direct course. The straightening process had increased its fall, willows no longer protected its banks, and soon it began eating its way downward through the fine silt it had been so long depositing in the valley.

Then one hot summer day a cloudburst struck far up in the mountains. Within a short time a high wall of water burst from the canyon above Cainesville and poured down through Blue valley. Few meanders were left to check its flow and but few willows to protect its caving banks. When the flood subsided it was found that the river had lowered its channel nearly three feet through the entire length of the valley.

This meant that old irrigation ditches would no longer carry water to the fields. New ditches had to be dug, sometimes for miles, to tap the stream at a higher level. The channel also had been greatly widened, necessitating larger and more durable diversion dams. But the people went to work energetically and in time repaired the damage. It had been a very unusual flood, they said, and might never happen again.

But it did happen again and again, and for a reason not then understood. Horses and cattle of the first settlers were being gradually replaced by sheep, which for a time were more profitable. As sheep destroyed desert vegetation floods became increasingly more disastrous. New ditches had to be dug to tap the precious water, now several feet below its old channel. The channel, too, had widened, cutting away hundreds of acres of rich soil.

At Hanksville, where the stream passed through a sort of rock dyke, a dirt and brush diversion dam had been built. It served its purpose well enough until the

first big flood, when it was washed away. Another larger dam was built. This in turn melted before the increasing floods. A third was constructed, and a fourth, of rock, logs and sand. They all went downstream, one after the other, leaving ditches high and dry in summer when water was most needed.

People were spending more time on their dams and ditches than on their farms. The work was unending, yet it had to be done if the settlers were to survive. There was no such thing in those days, in Hanksville at least, as ditch digging machinery. Every foot of irrigating canal and every dam was built by horse and man power. They did not even have powder to blast rock, and several tunnels through solid rock between Cainesville and Hanksville were dug by men with rock hammers and crowbars, lying on their bellies.

No irrigating company ever was formed for the settlements along the Dirty Devil. The work was all cooperative. Whenever a ditch needed mending or a dam had to be built the Mormon bishop called on men to do the work and they did it without remuneration other than the eventual benefit to their own land. As the river channel widened the road had to be changed, until at last it was carved out of the bluffs high above any possible flood. This was also done by cooperative labor before the county was able to appropriate money for such construction.

As sheep gradually destroyed natural vegetation the river cut its channel deeper and wider with each succeeding flood season. Many rich farms were washed downstream into the Colorado. Others had to be abandoned because it was impossible to put water on them. A large part of the town of Hanksville was washed away. But the people of that village believed they could control the floods if they had a dam that would hold. So they went to work building a permanent dam at the narrows above town. Rock was cut and hauled from nearby hills and laid up by hand 40 feet high and over 100 feet wide between two rock abutments. This required an immense amount of labor for so small a community, but it was finally finished and Hanksville felt safe for the first time in many years.

In August of the following summer another big flood came roaring down the Dirty Devil. Every citizen of Hanksville rushed out to see if their dam, built with so much effort, would hold. When the peak of the torrent passed they were overjoyed to see their rock wall still intact—but the river channel behind it was level full of silt!

The Hanksville dam still stands, a monument to the tireless energy of those



This diversion dam, built by cooperative labor, is a monument to the Mormon settlers of Hanksville, Utah, on the Dirty Devil river.

early settlers along the Dirty Devil. But most of the fertile acres below it have gone down the Colorado and those still remaining are scarcely worth watering. In earlier days Hanksville was a lively town of prosperous farmers and cattlemen. Now it is almost abandoned. In its heyday Charley Gibbons' store did an annual business of \$200,000. When I passed through last September, the town's one remaining store expected to close within a month.

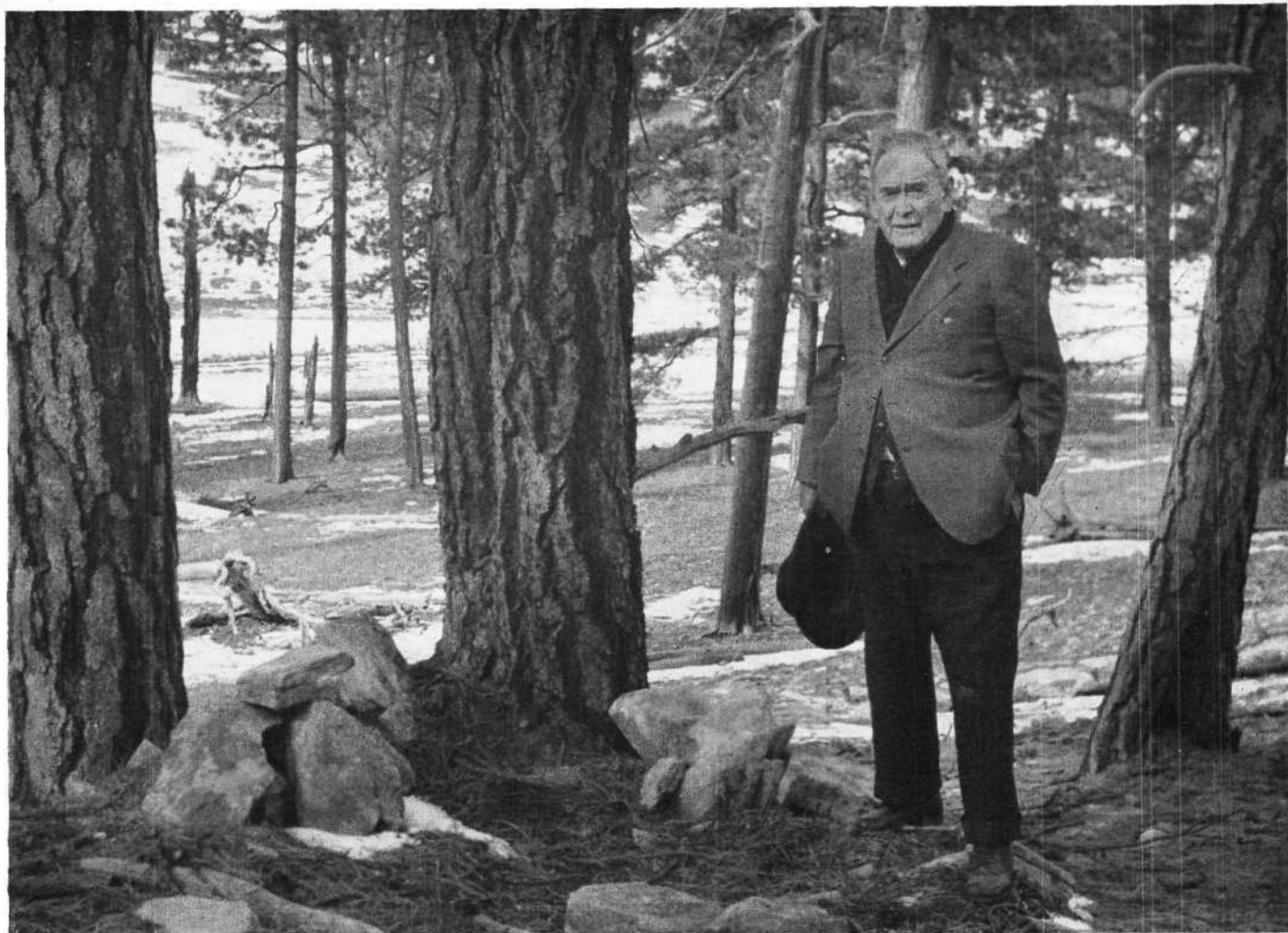
Where once the river meandered quietly between willow-lined banks, it now has cut a channel sometimes 40 feet deep almost the full length and width of its long valley. What land remains has long ago reverted to sagebrush and greasewood. Here and there dead orchards mark the site of some pioneer home, while old ditches, long dry, are lined with dead stumps.

Where once stood the flourishing village of Giles nothing is left but an empty church, standing gaunt and alone in a sea of sagebrush. At Cainesville a few ranches survive, but even these are being slowly washed away.

Returning from a recent trip to the Henry mountains, Dr. Inglesby and I were about to cross the river above Cainesville when we heard a roar and saw a four-foot wall of water advancing toward us. It was too late to cross so we stood on the bank and watched the flood come down. Higher and higher it rose until it filled the wide, deep channel. Not until noon the next day did it recede enough for us to cross safely. We knew that many more acres of red soil had been washed down to Boulder dam. And we knew, too, why old-timers along the river still persist in calling it the Dirty Devil.

This pioneer home, carefully constructed of native rock, stands abandoned in the sagebrush along the Dirty Devil.





Frank Walker, renowned Navajo interpreter and historian standing by one of the pits in which were buried some 40 Mexicans killed in the 1860 massacre of the Chuska mountains.

Massacre in the Mountains

By RICHARD VAN VALKENBURGH

POINTING to a shadow-streaked chasm that jagged upward from the sunny plains of Tóhatchi and faded into the mist settling on the pine-clad heights of the Chuska mountains, Frank Walker, my Navajo friend told, "At the very source of this *Tódilkil tsékoo*, the Whisky Water canyon, there is a small laguna. On a hill nearby lie the bones of many Mexicans!"

For a long time I had been hearing hazy tales of this epic massacre. But I could never pin a Navajo down to specific details. When I questioned too closely, they always fell silent. I grasped this opportunity. Could Frank guide me to the battlefield?

"No!" he answered. "I've wanted to go up there for years. But I never got around to it. There's an old man near Tóhatchi

Old timers in the Indian country say there is only one man who knows the true story of the massacre which took place in the Chuska mountains of New Mexico in 1860. He is Naltsos Nalyai, son of the Navajo chief who led his warriors against the slave-raiding Mexicans. Here is recorded the story of that dramatic encounter on the snow-covered pine heights of Chuska as Naltsos Nalyai told it to Richard Van Valkenburgh.

called Naltsos Nalyai, the Paper Carrier. The 'old timers' say that he's the only man who knows the real story of what happened."

The first snow had fallen. We knew

Illustrated by Charles Keetsie Shirley

that our man had shifted from his summer camp in the mountains to some sheltered nook in the lowlands. As the trader is always the directory of local Navajo movements, we headed for the Tóhatchi trading post.

Pushing through the Navajo lounging on the stoop we entered the "bull-pen." The Navajo turned from their trading to shake hands with Frank. For Ashki Sklinih, the Freckled Boy, was one of the most respected elders of the tribe. He spotted an old man warming himself by the stove. The cast of his face was familiar—I tried to place him.

For a few moments Frank talked with him. Then he called me over. After we shook hands my interpreter said quietly, "This is Naltsos Nalyai! He has the true story from the mouth of the chief who led

the Navajo warriors. For he is the son of Dabanah Badanih, whom the Mexicans called Manuelito!"

With this casual introduction Frank made me acquainted with a man whom I had sought to meet for years. With his sister, the old wife of the headman, Daya-chiibikis, they were the sole survivors of the 37 original members of Manuelito's family group. The familiar look was that of the son's striking resemblance to the old Ben Wittick portraits I had seen of the war chief.

The pewter-colored line of the snow-fog was creeping down the black scarps of the Chuskas when we left Tóhatchi, Where-They-Dipped-For-Water. Located 24 miles north of Gallup, New Mexico, on U. S. Highway 666, this Indian service village is a tiny dot inside the apex made by the juncture of Tódilkil tsékoo and Tóhatchi creek.

After passing through the hamlet we swung northwestward over the Chuska Pass trail. Clinging to the rocky walls of Tódilkil tsékoo we moved steadily upward over a series of tight hair-pin turns. When we passed from the barrens into the juniper zone, Naltsos Nalyai called for a halt.

He guided us to a promontory which projected from the smoothly fluted lava cliffs that skirt the dome of Deza Point. Waving his arm in an arc eastward he said, "Look!"

Below us spread one of the grandest scenic vistas in Navajoland. In one endless swell the sun-brightened plains of the Great Bend of the Chaco rose to the dusty lavender line that was the Continental Divide. The Chaco river was a great white arc bent to the north. One hundred miles eastward the 11,389-foot peaks of San Mateo were old turquoise sheathed in white shell.

We soon passed from the brightness of the lower world into the smothering nether of the snow-fog. Patches of slushy snow grew more frequent. After skidding up a series of steep grades we reached the 8,200-foot summit, Chuska Pass. Naltsos Nalyai called the gap *Tsébiníyoli*. Windy-Gap-Between-the-Rocks.

On a spruce covered point to the south rose the truncated cone of *Ch'ooshgaii*, the White-Colored-Spruce - Tree - Mountain. One of the major sacred peaks of the Navajo, it figures prominently in the rite-myths of the Night Chant. In the stories accompanying the Blessing Way ceremonies it is described as the head of the great human figure that forms the *Yo'didzil*, or Mountain-of-Precious-Stones.

Our trail swerved north from the main road. In second gear we picked our way through a labyrinth of ponderosa pine that lay uprooted and awry in every direction. Naltsos Nalyai commented, "Bad business! Each fall the 'Wind People' do this.

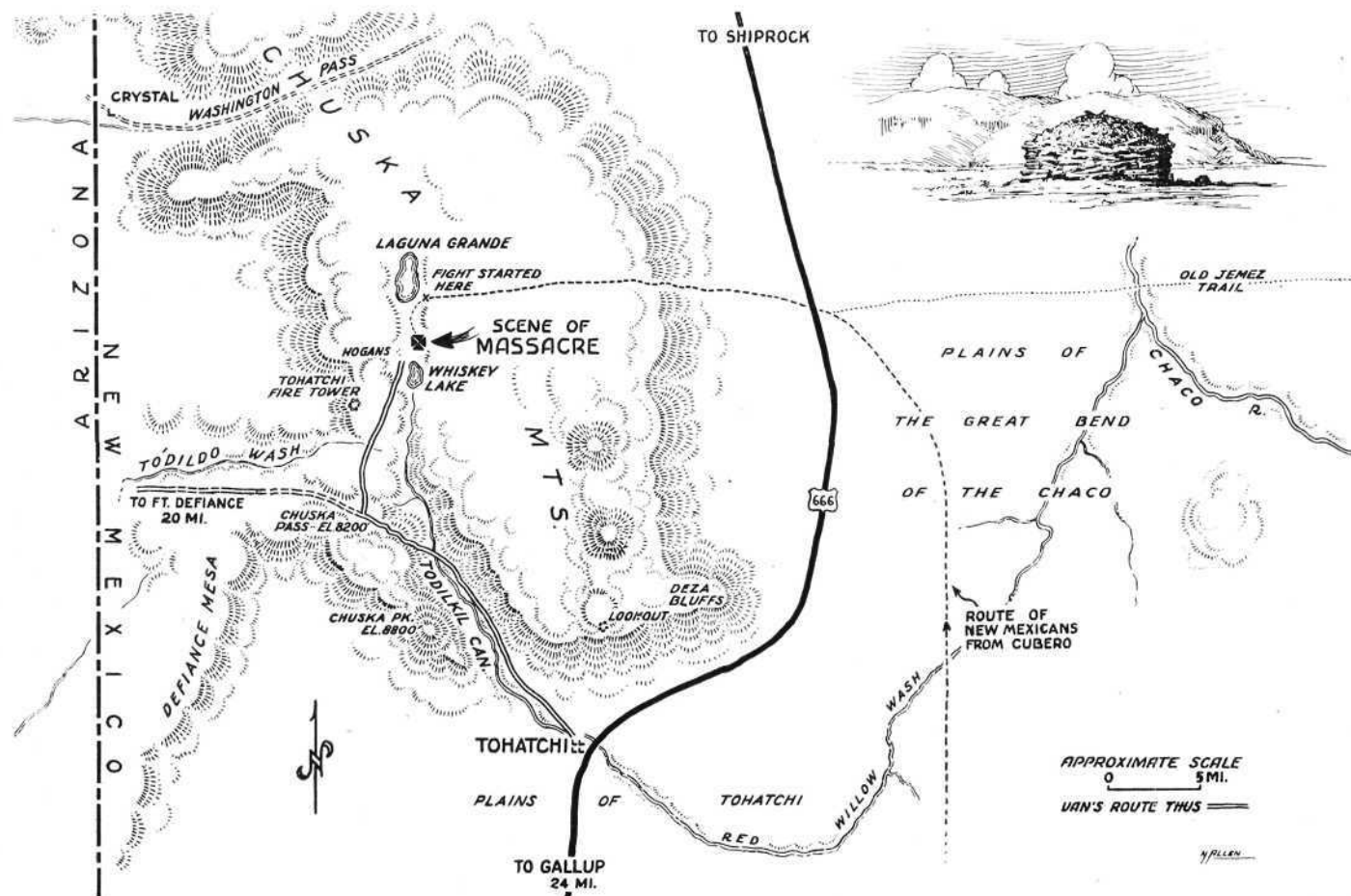
They come howling across the mountain. Then they tear up the 'Tree People' and throw them around like this."

We came to a break in the forest. Below us a tiny lake gleamed like polished obsidian in its frame of white snow. Naltsos Nalyai told, "This is *Tódilkil be'ekiid*, the Whisky lake. The water makes fine *tóla-pai*. Each 'corn-ripening-time' the old people came up here. They made corn-beer and had a big time."

Across the flat an ancient "forked-stick-hogan" stood gaunt in the snow. While I sawed a section from one of the main beams, Naltsos Nalyai and Frank argued as to its age. According to local tradition, Naltsos Nalyai calculated that it had been erected "three-old-men's-lives-ago." He was not far from correct. Tree-ring counts showed that my beam had been cut near 1760 A. D.

After bucking another half mile of slush we dropped into the thin valley that grooves out the mountain top between Washington Pass and Whisky lake. Naltsos Nalyai called for a halt by the banks of a frozen brook. Peering through the fog that was now a cold steam curling up through the pines, he said, "La! This is the place!"

The rotten ice crackled as we crossed a frozen meadow. Under the low rim of a pine-covered knoll lay a large log. While we sat there and smoked Naltsos Nalyai



perpetuated his father's saga of the massacre in the mountains:

"*Djinii*. Manuelito, my old father told me this.

"It was in the 'time-when-the-looka-reeds-flowered.' Bad news reached the Navajo camps. Many Mexicans with guns were making a war trail to the west. Enemy Navajo from Sandoval's band at Cebolleta were guiding them.

"Natáliith, the war-singer, started to make 'medicine.' Our warriors started to patch their thick buckskin shirts. While they sharpened their lances they told how they would stick the Mexican coyotes. It was always like that—the old time Navajo were always hungry to get blood-revenge. They always remembered the massacre of

many of their kinsmen in that cave in the Cañon del Muerto.

"Our scouts kept watch on the Mexicans. They came towards our mountains over the Great Navajo trail. That ran from Cubero through the lava beds and up the valley of La Agua Azul. Today the railroad goes over part of the trail. Near Fort Wingate they turned north and passed through La Mesa de los Coyotes.

"When they camped at a spring in the foothills near *Naschitti*, the Place-of-the-Badger, we knew what they were after. They were going to raid our summer camps near *Tódilkil be'ekiid*. Our old grandfathers hurried their women and children off the mountain. With the sheep they would hide in the deep canyons of the *Tsegii* to the west.

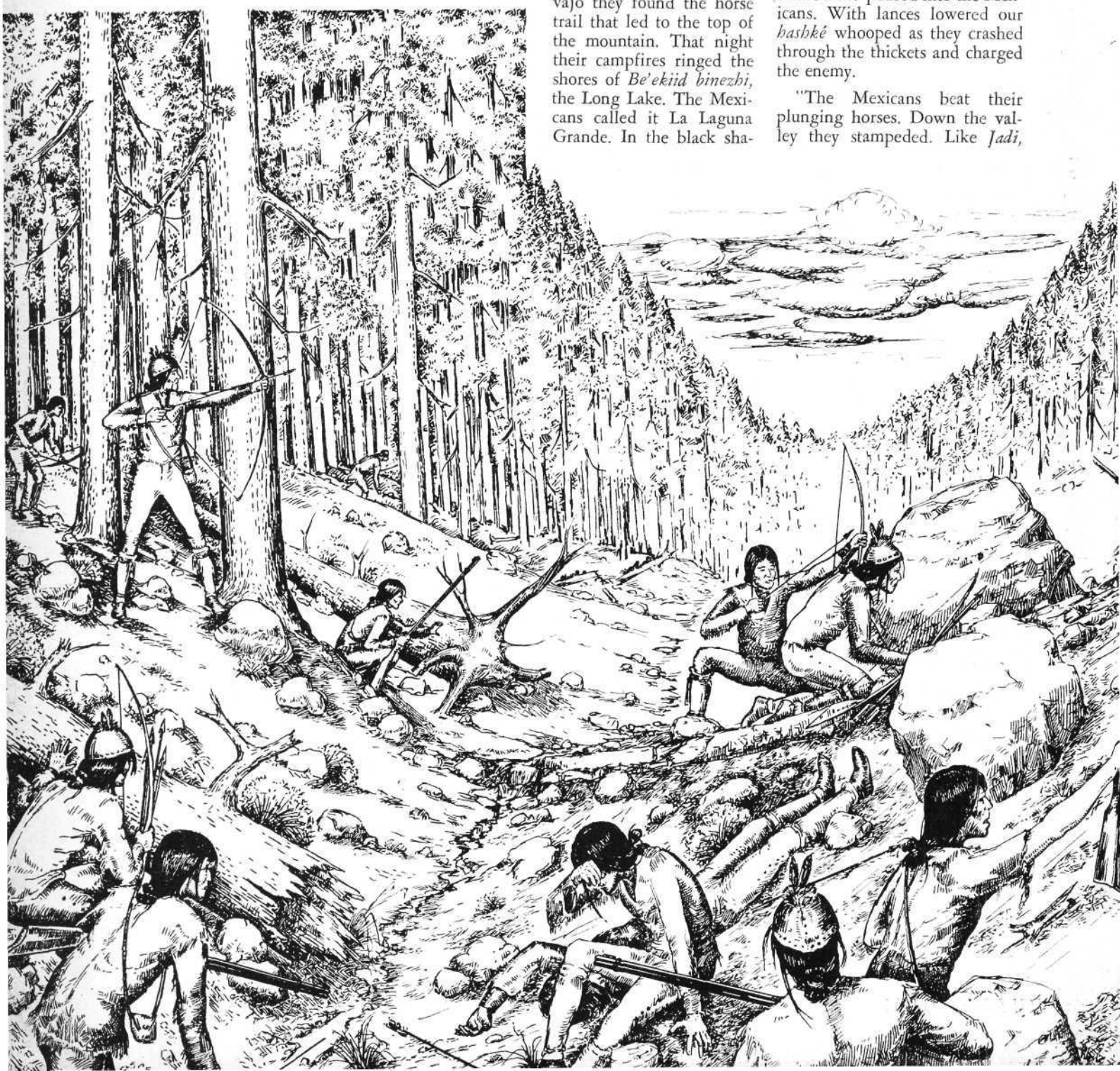
"Guided by Enemy Navajo they found the horse trail that led to the top of the mountain. That night their campfires ringed the shores of *Be'ekiid binezhi*, the Long Lake. The Mexicans called it La Laguna Grande. In the black sha-

dows just beyond the glow of their campfires, my father's warriors fletched their war bows.

"They broke camp before daylight. Like wolves they wanted to surprise the Navajo. Hidden in the dense forest our warriors skirted their flanks and rear. When the red sun of *Johanabai* came up from behind the blue ridge of the mountains they rode into our trap. It is where this valley is pinched in by two oak-covered spurs.

"My father motioned to Natáliith. The *habli* gave the signal! It was the gobble of *Tazhi*, the Wild Turkey. From three directions the singing war arrows of the *Diné* poured into the Mexicans. With lances lowered our *hasbké* whooped as they crashed through the thickets and charged the enemy.

"The Mexicans beat their plunging horses. Down the valley they stampeded. Like *Jadi*,



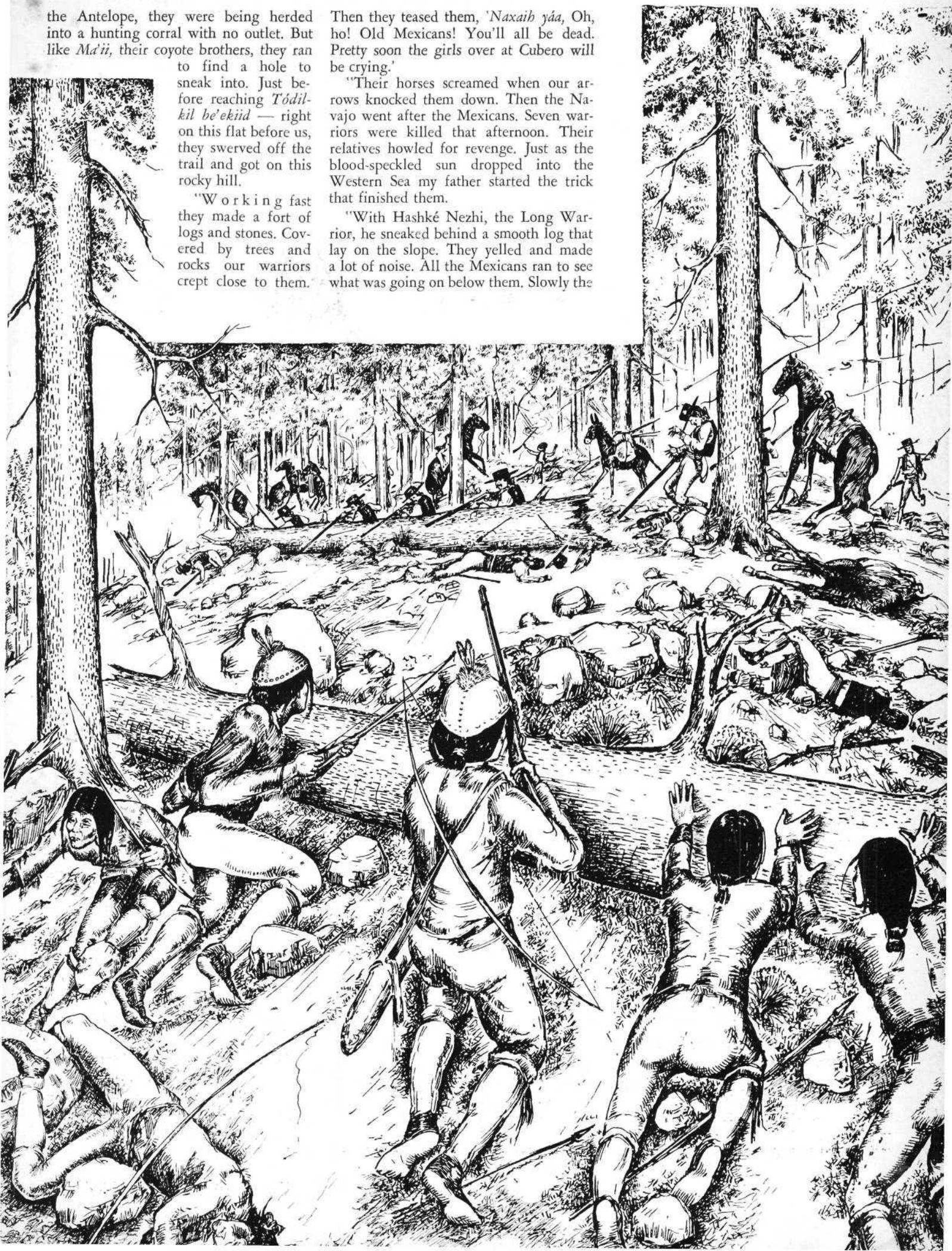
the Antelope, they were being herded into a hunting corral with no outlet. But like *Ma'ii*, their coyote brothers, they ran to find a hole to sneak into. Just before reaching *Tódiikil be'ekiid* — right on this flat before us, they swerved off the trail and got on this rocky hill.

"Working fast they made a fort of logs and stones. Covered by trees and rocks our warriors crept close to them.

Then they teased them, '*Naxaih yaa*, Oh, ho! Old Mexicans! You'll all be dead. Pretty soon the girls over at Cubero will be crying.'

"Their horses screamed when our arrows knocked them down. Then the Navajo went after the Mexicans. Seven warriors were killed that afternoon. Their relatives howled for revenge. Just as the blood-speckled sun dropped into the Western Sea my father started the trick that finished them.

"With Hashké Nezhi, the Long Warrior, he sneaked behind a smooth log that lay on the slope. They yelled and made a lot of noise. All the Mexicans ran to see what was going on below them. Slowly the



Navajo rolled the log toward them. While they were banging away at the log something else was happening!

"Like *Nastui tso*, the mountain lion, my father's warriors crept in from the side. Only the summer song of the gentle 'Breeze People' playing on the mountain top ruffled the deep silence of the forest. Out of this stillness came the staccato gobble of *Tazhi*!

"Whooping and running zig-zag my father and Hashké Nezhi charged. Musket balls whistled all around them. Like a stroke of 'male-lightning' the hidden warriors struck from the sides. With lances and knives flashing they swarmed over the cornered Mexicans.

"Most of them were killed back of the breastworks. A few broke away and ran through the forest like rabbits. Warriors on horseback rode them down. It was over quickly. Before the blue smoke of the gunpowder had drifted up through the pines, the ground was covered with dead Mexicans!

"Something moved under the pile of dead Mexicans. My father pulled a wounded man out by the legs. Someone recognized him as an Enemy Navajo called José. They killed that traitor right there. Before the war party rode off the mountain they laid their dead kinsmen in deep crevices and covered them with rocks.

"Later the tribe held a 'Swaying Dance.' That was to purify the warriors who had scalped Mexicans. The medicine men came up here. They had to have enemy bones to wrap in the ceremonial bundles. Since then our *hathli* always come up here to get bones for the *Anaá'djibih*, or Enemy Way, which you *Bilakana* call the 'Squaw Dance.'"

With this Naltsos Nalyai got up from the log and motioned us to follow him. As we climbed the slope toward the knoll he told, "*La!* It was right here that Hashké Nezhi and my father rolled that log toward the Mexicans. He brought me up here just two years before he died. In *Bilakana* count that was in 1892."

We climbed to the top of the knoll. Before us the crumbled breastworks of lichen-covered stones and rotted logs littered and sluffed off the malpais rim. Under the trees on the ground lay the scattered skeletons of many horses. Mixed with them were a few smaller bones. Looking closer I saw that they were human vertebrae.

I looked at Naltsos Nalyai. He glanced at a rock-lined depression. He stood stock still. I moved nearer. The whitened tip of a human pelvis poked out of the black humus. I kicked back the blanket of pine



Naltsos Nalyai, the last son of Manuelito the war chief.

needles. In a semi-circle below me I saw the top-fill of a charnel pit. At my feet were the remains of some two score Mexicans killed in the massacre of the mountains!

The black wind of the winter night whispered a moaning dirge as we drove out of the sinister mountain valley. I was a bit queasy—but felt no pity for the Mexicans whose bones now make "Squaw Dance" medicine for the Navajo. Starting with the massacre of some 100 women and children in Cañon del Muerto in 1805 their bloody slave hunts could bring nothing but reprisal from the Navajo.

• • •

Following my custom when I hear a

Navajo story of unusual historical significance I searched through the archives for the New Mexican version of the massacre. After some digging I found in the July 18, 1860, number of the Santa Fe Gazette:

"... Manuel E. Pino and Manuel Chaves led a force of about 400 into the Navajo country this spring. Another party of about 50 suffered heavy losses this month in a fight with the Navajo near Laguna Grande."

Again Navajo unwritten history proved remarkably accurate. Sometimes I wonder—would not the bloody history of our Indian Wars have been more accurately and sympathetically portrayed had the Indian slant been preserved?

The Souths have abandoned until spring their search for a new home—in deference to a snowy winter which already has hemmed them in the little Utah valley where they have found a temporary refuge. It was while exploring the strange volcanic country surrounding the Little House, that they were inspired to take up again one of the primitive arts they had learned in their Yaquitepec home. The willow trees they found up a sandy wash were promptly raided for their long plicant shoots, and packed home by Rider. Now the South family will have another enjoyable activity to wedge between story-telling and arithmetic lessons.

Desert Refuge

By MARSHAL SOUTH

IT IS a good while now since the Pilgrim, with his covered wagon and burros, vanished down the lone desert trails. And we are still here in the Little House under the Utah stars. Here we shall remain a while. For at the last minute we decided to put off our onward trek until the milder weather of Spring. Not that we have forgotten the Pilgrim's message, nor his tales of buried Indian cities. But the high mountain passes are chill now with snow. The search must wait awhile.

And the delay, though we chafe against it at times with an impatience to be on the trail once more, has brought no dull moments. There has been so much to do—and, in this new section of the great desert wonderland, so much to see. Plans or no plans Time will not stand still. Already it has swept us past another Christmas and into the wide highway of a new year.

It was a happy Christmas. And even though in a war torn world the word "happy" may seem out of place, the deeper significance of Christmas is such that the festival should be a happy one. Even in the midst of sorrow and battle and sudden death. For what is Christmas but a token, a sacred reminder, a testimony to Immortality—to a Life and Hope that rise triumphant over death? It matters not where you celebrate Christmas—in a mansion, on a battlefield, or under the lee of a creosote bush on a lone desert. Its inner sacred meaning is the same.

But Rider, Rudyard and Victoria still view Christmas from the very personal angle of Santa Claus. Daggdly, all through these past few months, they have refused to be impressed by our numerous gloomy warnings that the old Saint would have a difficult time getting through this year. What with the bombs and the airplane-crowded skies and the gas rationing and the shortage of sugar, we warned them, he might be prevented from making his annual round entirely.

"Sandy Klaws," announced Rudyard with lofty authority, "—is majick! It would take more than the worstest war to stop him. I just *know* he's gonna come. An' I'm gonna hang up my stocking just like always."

"An' I donna hang up my 'tocking, dust like a'ways, tew!" shrilled Victoria, faithfully echoing, as is her custom, the words of her hero. "Sanda Caws is maddick!"

Rider refused even to be drawn into the discussion. When Rider knows that a thing is so, then it *is* so. Why waste time arguing the matter. These tiresome oldsters, with their wavering faith! In due course, matter of factly, he hung up his stocking with the rest.

And the calm faith of all three of them was justified. Of course! For on Christmas morning there hung the three stockings, stuffed full. Shamefacedly we had to admit, amidst triumphant laughter at our expense, that we didn't know a thing about Santa Claus. He really was magic, we acknowledged.



*Rudyard and Victoria trying to catch frogs in the reservoir
—a favorite retreat of the South children.*

Christmas always makes one a little misty eyed with its renewal of the ties of friendship and remembrance. So many friends, new friends and old. Friends whose cheery greetings came in person, and friends whose hearty letters and cards came winging in from every quarter of the compass, across many a weary league of desert and of mountains. And how shall we answer, we who so sadly lack the magic of old Santa Claus whereby he annihilates distance and who would, if he could, leap nimbly down the chimneys and grasp the hands of every one of his well-wishers. That is what we would like to do. But we cannot. We are tied to the feeble substitute of mere words. Dear friends, our thanks. To you, each and every one of you, both near and far, our sincerest thanks and our heartiest New Year's wishes. Your cheery cards and letters all will be acknowledged in time. Alas how slow we are sometimes. Some of you must have lost all faith in us as correspondents. But it is not from indifference that our letter writing lags. Often sheer time lack blocks the task. These last months upon desert trails have been busy ones.

Snow whips often, these days, against the mountain peaks. And the winds that come galloping down across the foothills into this sheltered desert valley sometimes have a real bite in them. But the little tin stove which this year must take the place of the Yaquitepec fireplace does its duty nobly. We miss the dry mescal butts, which on Ghost mountain made the fires roar with their tossing fountains of flame. But there is other fuel in plenty and our "fuel gathering expeditions" of Yaquitepec merely have been transplanted to Utah. Dead mesquite and cottonwood and rabbit bush. It all goes to swell the pile in the back yard which each morning is crusted everywhere with thick crystals of frost—a lacy tangle of sparkling white sticks and branches through which the little white-crowned sparrows hop chillily, hunting for their breakfast.

Winter and warmth make a happy combination. The little stove roars red and there is usually a big iron pot bubbling upon it. A combination to induce story-telling. And it often does. The other morning, busy about our various tasks, we were suddenly aware that—down by the stove—Rudyard was regaling Victoria with a lecture on—of all things—the city of New York.

"... an' it's the biggest city in the world. An' down on the corner of Fourth street there's a tree-menjus building, six feet high. An' ..."

A loud, sarcastic sniff, from the region of the table where

Rider was plowing through his daily dose of arithmetic—with one ear cocked for outside diversion—at this point disconcerted the lecturer, causing him to hastily amend his statement:

"I mean th' t'menjus building is a'most one hundred an' twenty feet high," he declared loudly. "An' the peepul . . ."

The sniffing from the listening arithmetician here lifted to a wild horse laugh, against which no amount of self-importance could stand. Flustered, Rudyard leaped to his feet: "C'mon," he ordered gruffly, grabbing the enthralled Victoria by the hand and starting for the door. "C'mon outside. I got some bizness derangements to 'tend to."

And on the outside step, in the sunshine, where the lee of the wall sheltered them from the wind, the thrilling travelogue was run to a peaceful conclusion, with Victoria, breathless and goggle-eyed, hanging on every word. We couldn't hear much, even with the window stealthily opened. But we did get fragments of amazing statements. As, for instance, that: "In Noo York all the ground is full of submawine twains, jus' packed full of peepul. An' all day they go—Bizzzzz! Right between your feet." And "All the emptiness is used up, so there isn't any more room to build houses. But the peepul don't mind. They live all lots of hundreds together in little compartments, very happy and demented."

Yesterday, because the afternoon was so sunny and pleasant, we sidetracked a score of pressing tasks and all went up to the old reservoir. The reservoir is part of the domain of the Little House too. Some distance away and under the toe of a ridge it is a favorite spot with Rider, Rudyard and Victoria. Its weedy bottom, partly silted in, is now a thicket of water-grass and reeds. Cottonwood trees stand sentinel along the embankment and cast fantastic reflections in the shallow, marshy water that is the haunt of frogs and all manner of diminutive swamp creatures. Birds flit to and fro over the reeds and cottontail rabbits hop through the low, brushy thickets that have grown up along the neglected fences. From the summit of the embankment you can look away off across the valley and the desert ridges to where far fantastic cliffs of blue and white and pink and lavender hang phantom-like against the sky rim. Mysterious mountains—they draw and hold the imagination. For behind them lies some of the wildest, most alluring lands on all the earth—the vast sweep of the Painted desert and the Indian country.

The fever of "exploration" drew Rider and Rudyard away from the reservoir after a while. And Victoria clamored so hard to go with them that we all tramped back among the stony ridges, investigating the gullies and peeking hopefully into every small cave. Black lava and red sandstone here take the place of the Ghost mountain granite boulders. And as wind and rain can carve sandstone much more easily than granite the supply of tiny caves was quite satisfying. But not so their contents. The ancient people lived all over this country. They were here in numbers in the dim period subsequent to the "fire age." And there is ground for belief that they were here even before the volcanic eruptions. But the mills of Time, which slowly grind all earthly things to dust, had not spared many traces. A couple of fragments of very old pottery—undecorated—were all that even the sharp eyes of Rider and Rudyard were able to discover for their "museums."

We obviously had wandered into a poor relic district. But farther back, in the canyons and on the rocky mesas overlooking the Virgin river, we had been told there were petroglyphs and old village sites and a wealth of shattered pots.

Up a little sandy wash that was patterned with the criss-cross trails of the small furry folk of the desert, we presently came upon several willow trees, lifting above a bordering thicket of rabbit bush. Somehow the sight of a willow tree always evokes thoughts of basket making. And our glimpse of these proved no exception. They were promptly raided for a supply of long pliant shoots, which Rider volunteered to pack home. There has been little enough time for basket making

lately. But it is a craft which, like pottery and weaving, gets into one's blood. Once practiced its lure persists, and fingers are always itching to be at it again.

It is a healthy sign, and also a significant one, that interest in the primitive arts is growing. There are far too few people who realize the "escape" that handiwork of this sort provides. To nerves raw-edged and shattered by machine "civilization" there is nothing more soothing than the moulding of a clay pot or the weaving of a basket or a blanket. The nerves relax. As fingers fashion the moist clay or weave the threads or pliant straws, Time and Life seem to slip back into their rightful place. One seems to live again in an honest simple primitive world of homely virtues and peace. It is an inexpensive means of temporary "escape" too, as well as a fascinating one. Some sort of clay is almost everywhere, for the digging. And almost everywhere one can obtain some sort of natural material from which to weave baskets or rugs. Try it sometime. You may be surprised at the enjoyment you get from it. And it is not outside the bounds of possibility that skill thus gained may, some time or other, be extremely valuable to you.

We wearied of exploring and tramping at last and sat down to rest upon a high sandstone ledge. From our vantage point we could look far out across the sere, foreground slopes and deep down into the valley of the Virgin river. In the sunlight the river was a thread of flashing silver, winding amidst the patterned green of Mormon farms.

It is evening now. And as I sit here on the embankment of the old reservoir, the typewriter balanced on my knees, my back against a gnarled old cottonwood, all the world seems very still and hushed. The sun has gone down behind the red sandstone ridges and a thin haze of storm, perhaps a warning of heavy weather to come, films the southern sky. Twilight is reaching into the canyons along the Virgin river, glooming them with phantom draperies of blue. Across the sparse brown grass of the slope below me there is a patch of color moving. It is Rider in his little red and blue blanket going to bring in the grazing goats for the night. The faint, musical tinkle of their bells comes drowsily across the silence. Silence and Peace and the Mountains.

Yes, the mountains. For, away on the horizon, hardening to a rose-tinted indigo in the lifting shadow of night, stand the great buttressed mountains that are the gateway the Great Spirit reared to guard the land of the Navajo—a simple, nomadic people, very close to the earth. And somehow, this evening, as I watch the eerie shadows deepen amidst the far distant crags and battlements, I am thinking of the words of an old Navajo, spoken many, many years ago:

"This is our land. It was our fathers'. We were here before the white man came. We will be here long after he has vanished away."

The words of an old, old man of the desert. And spoken in bitterness. Just how much truth do they hold?

Sometimes I wonder.

PATH OF EMPIRES

*There lies the Past,
For every eye to see.
The ancients could not last—
Neither shall we.*

*A climb to height,
And we relax, benign,
As if our special might
Must stay divine.*

*And in that hour,
While we forget to pray,
Our cherished super-power
Starts to decay.*

—Tanya South



—Spence air photo.

WALPI Desert Magazine's landmark contest for December ended in a tie with Leo Weaver of Flagstaff, Arizona, and Richard Bennett of Phoenix, Arizona, each awarded \$5. Both of these writers presented the most complete story of the Hopi First Mesa and the village of Walpi. Judges took into first consideration the number of historical facts presented, description of the area, and present day status. The stories written by Mr. Weaver and Mr. Bennett are combined in the following article.

By LEO WEAVER AND RICHARD BENNETT

THE unusual aerial photograph in December issue of Desert shows the ancient Hopi village of Walpi, as it perches on the east end of First Mesa, one of the three famous Hopi mesas in the Hopi Indian reservation of northern Arizona.

It may be reached about 140 miles northeast of Flagstaff by graded roads, passing through hills and valleys of colored clays and sands, with the landscape dotted intermittently with bands of Indian sheep and goats guarded by shaggy-haired boys and shy little girls. It is about 80 miles north of Winslow from U. S. Highway 66, or about 80 miles east of U. S. 89 on the Tuba City road.

In this area are eight Hopi villages on three mesas. On the

first, or eastern mesa, stand Walpi, Sichomovi and Hano. On the second or middle mesa are Mishongnovi, Shipaulovi and Shungopovi, and on the third or western mesa are Oraibi and Hotevilla. The second and third mesas lie seven and 20 miles respectively west of Walpi.

On the thin neck of land nearest the center of this picture and entirely separate and distinct from the rest of the mesa, perches Walpi. Then as the eye travels along the ridge toward upper left, a plain trail is noticed. Countless moccasins through the ages have worn this trail a foot deep in the rock. Immediately one enters another village within 50 feet. This is Sichomovi; then comes Hano on the far end.

In the left-hand portion of the picture is seen a small portion of Wepo Wash. On the right is the vast expanse of Polacca Wash, with the old foot trail from Walpi running down to it. The houses and peach orchards seen at the right foot of the mesa are those of Polacca. Younger Hopis who have been away to school and returned have built their homes there.

The straight white line running toward the upper right is the road to Keam's Canyon where the government agency in charge of all Hopiland is located. Then to the immediate left one notes the huge headlands jutting out into the valley. A dim line leading into this narrowing canyon indicates the trail to Chinle and Canyon de Chelly far to the east.

Just beyond the village of Walpi is seen a white scar which bears downward and to the left. This is the trail northward to the pine forests of the Navajo and here it is that one sees great

grooves in the solid rock worn there by logs dragged from those distant forests. Not drawn by team and wagon but by thongs placed over the brows of hordes of these diminutive Hopis—small but exceedingly powerful. In the roof-tops of the mesa homes of today are those same beams dragged from so far away.

Dropping from both sides of the narrow mesa, many dim trails are noted. These wind their precipitous way down to the tiny fields of corn in the lower plain and each morning the sturdy Hopis run down to till their crops and then run home again in the evening—and we mean *run*. A Hopi seldom actually walks. A very old woman with a heavy load of wood on her back will cover many miles during a day in a swift dog-trot.

It is on these mesas that the world-famed Hopi snake dances are held. At Walpi, where they are held in odd-numbered years, the nine-day ceremony reaches its most dramatic proportions. It occurs usually in late August and is conducted by the Antelope and Snake fraternities. Most of the Hopi ceremonies are supplications for rain and good crops. The snake dance combines a prayer for bountiful rainfall and resultant good crops, with a prayer of thanks for what the gods have brought during the past season. It is almost invariably followed immediately by heavy rains.

Walpi is situated on its high promontory about 500 feet above the valley. The mesa is not over 300 feet in width and less than a mile in length. Through the vicissitudes of centuries the Hopis have clung to this high mesa home, strategically advantageous in beating off marauding enemies.

From the valley the village appears as a huge fortress—the windows of the buildings not being noticeable due to their built-in construction. The architecture is prehistoric and early Spanish, built of stone poorly dressed and laid compared with

the best prehistoric. The outer structure surrounds a court which is terraced back.

Walpi was old when the Spanish Conquistadores discovered it in 1540. A detachment of Coronado's expedition, led by Don Pedro de Tovar caused consternation among the Indians when they reached the foot of the mesas on horseback. As it was their first sight of a horse they promptly decided that horse and rider were one and that they were man-eating animals. A short battle ensued after which the Indians were convinced with gifts that they would not be molested and a general fiesta was held at the mesa. Hopi guides then directed Don Lopez de Cardenas and some of the Spaniards to the "Firebrand River"—the Colorado.

By the tree ring method of time calculation it has been established that Oraibi was constructed prior to 1000 A. D., and Walpi, being "newer," was constructed somewhat later. These two villages are generally considered to be the oldest continuously occupied sites in the United States.

COMEBACK FOR PANAMINT CITY? . . .

Back in 1875 Panamint City on the fringe of Death Valley boasted 5,000 miners, gamblers, prospectors and fortune seekers. But when a "heavy ore" showed up in veins of silver in quantities sufficient to prevent profitable silver mining, the camp quickly died. Now because that "heavy ore" is tungsten, Panamint City may stage a comeback. Three men, Ralph and Philip Lisle and Charles Foote have leased the old Panamint City mine from Al Meyers of Pear Blossom, California. Two lots of ores hauled to the Mineral Reduction company at Laws, California, showed 20.02 percent tungsten and 26.45 percent tungsten respectively.

Food Will Win the War and Write the Peace

- America not only must supply necessary food for her millions of fighting men at home and on far flung global battle fronts but also has pledged herself to feed the starving populations of the world.
- Cooperating in the government's victory program is the Imperial Irrigation District which supplies water and power to Imperial Valley, one of the nation's most prolific bread-baskets, where essential footstuffs are grown the year around.
- Despite the handicaps of critical shortages in manpower and vital materials, the district is efficiently maintaining 1700 miles of distribution canals, 1300 miles of drains, 24,000 canal structures and the diversion of 2,000,000 acre feet of water into the irrigation system, with 75,000 deliveries made to individual gates each year.
- Imperial Valley farmers and their district have taken the offensive and their efforts and sacrifices are contributing to the final victory that is inevitable for the United States and her allies.

KEEP IMPERIAL VALLEY CROPS GROWING BY SUPPORTING YOUR DISTRICT WHICH IS HELPING TO WIN THE WAR.

Imperial Irrigation District



Use Your Own Power—Make it Pay for the All American Canal

LETTERS...

Miner's Hell on Four Wheels...

Mesa Grande, California

Dear Friend:

I noticed in your December issue in the article on "Miner's Hell" the statement that you and your companions practically tobogganed down that very steep hill into Fish Creek or Split Canyon wash. To quote your own words, "But I will defy anything on four wheels to make the return trip" up this steep hill.

Under ordinary conditions that is a safe proposition to make. The hill I would say is half pitch, like a roof or a 50 percent grade, and I will grant it is all a good navigator can do to keep a car from upending and rolling end over end, down the hill. But I challenge the statement that nothing on four wheels could go up this hill because my team, drawing a loaded buckboard, with myself driving on foot alongside the team, went up that hill and so out to Carrizo creek in March of 1911. My son Harvey was with me and he snapped the enclosed photograph as we neared the crest.

As you can see in the photograph, the horses were digging their toes in and straining every nerve to keep going for to pause would cause the buckboard to drag them downhill. Once started it was impossible to slacken up for a second but the team was true blue and full of nerve and courage and so climbed to the top dragging a load. Before risking the team I had prospected the hill to see if the feat was possible and concluded if I could keep the team moving I would have an even chance of making it.

In exploring the canyon my son found a narrow fissure extending to the top in the perpendicular wall, just wide enough for him to hitch himself to the top of the cliff. By resting his back against one wall and his feet on the opposite side, he could hitch himself along until the top was reached. I followed Harvey up and we proceeded to build a monument of loose rocks. In this monument we placed our names and date, then stuck an ocotillo in the center. We descended the same cleft. This vertical split in the formation is the only way to reach the top. Up there we found no trace of any former visitor.

Just before entering the portal to Split Canyon we searched the dry, barren and rocky terrain to the north and found the so called Elephant trees, which an old prospector had told us about. I sent leaves, berries, bark and a full description of the fat, dropsical looking trees, with photographs to Berkeley and they were classified as *Bursura microphylla*. So far as I



Ed Davis driving his team up steep Fish Creek incline.

know, we were the first ones to identify this rare species in California.

ED. H. DAVIS

Desert Will Remind Them...

Murray, Utah

Dear Sir:

I have been buying the Desert Magazine on the newsstand and enjoying each copy as I do an interesting, refreshing trip to the desert. Now that I am about to enter the armed service of the United States, there is one thing I want to be certain of receiving, regardless of where I may be—the monthly issue of Desert Magazine. I believe that in the present confused state of the world, we are likely to lose sight of the true values of life, which are so deeply hidden behind the camouflaging of artificiality. I like to be reminded of the fact that "there's peace on the desert" and that the desert will be there silently waiting when the present confusion ceases.

Up to the present time, I have been attending the University of Utah in Salt Lake City where I have been majoring in botany. I certainly have enjoyed your articles of a botanical nature along with all of the other swell ones.

CALVIN McMILLAN

They Read DM Down Under...

U. S. S. Tangier
In the Pacific

Dear Mr. Henderson:

Have just finished reading November issue of the D.M., which has already passed into other hands. From those it will go to others, who are glad to get a bit of the Southwest again. Sorry I can't save them, but out here it would be a poor show to keep any reading material out of circulation. I even took a crack at your Rockhounds Quiz, though as a geologist I'd make a swell printer, or something.

Guess the thought about the desert making you appreciate things hits the spot. Funny how good a couple of scrubby cottonwoods can look. I've yet to find as much to desire in a tangled mass of trees, creepers and vines as in a few well placed palms at some oasis. Gives you the feeling of more elbow room.

By the way have you printed anything on the Odessa loop mines near Calico? Would like to hear a bit about their history as I've dipped into some of the workings there a bit.

Here's another vote for Marshal South's articles. He and his family are much like some close friends of mine at home.

I'm enclosing Christmas gifts orders to two fellows who were buddies of mine in the R.A.F. before I transferred to the navy, and I guess they deserve a good look at the desert after listening to my sales talks for four months.

FRANCIS DICKINSON, AM 3/c

Dear F.D.—There was a short article about Odessa canyon and its mining history in October, 1938, issue of D.M.—L.H.

Desert Goes to Alaska...

Santa Barbara, California

Dear Miss Harris:

This year we decided to give ourselves a Christmas present of the magazine that we know will give us year-long reading enjoyment. Since we first started buying the Desert several years ago we haven't missed an issue, but sometimes we have difficulty in finding it on newsstands in various towns when our work keeps us moving around.

I have just returned from the Yukon Territory where I spent several months working on the P.R.A. highway project. The Desert Magazine followed me there and was read avidly by almost all the fellows in camp. It seemed odd to be reading of wide open spaces, sand and chaparral while living in a land of dense spruce forests and bush covered slopes. That land holds a promise and lure for rockhounds of an adventurous and hardy class, and there probably will be many a field trip in the future when it can be opened to the public.

DWIGHT R. CRAWFORD

Invitation to Artists . . .

Bodfish, California

Dear Mr. Henderson:

It is hard to find words to express how much enjoyment my husband and I get out of your magazine. In the difficult months ahead Desert is going to be a life-saver to many of us.

Although we live here in the mountains we have made frequent exploring trips into the desert, and thanks to friends who first introduced me to D.M. I am fast becoming an ardent rock hound.

Recently a friend and I spent four glorious days exploring Red Rock canyon and vicinity. We spent one whole afternoon looking for opals, and I finally found one beautiful specimen full of red and green fire. We also had the thrill of partly excavating an Indian cave, digging up sections of beautiful basket work in an excellent state of preservation. We noted that some of it was woven together with twine, apparently made of yucca fiber.

The trip provided me with numerous sketches. Though deeply in love with the mountains here the desert fascinates me even more, for its vast distances and coloring.

I have been much interested in the articles appearing in Desert about other artists and their work and have missed not seeing any lately. The artist Harry C. Smith of Glendale has been staying with us and we have been painting together. Few artists can catch the mystery of shimmering haze and elusive cloud effects in the desert as Harry does.

If I thought James Swinnerton or any of the other artists written up in Desert would enjoy painting some of the mountain and desert scenery in this vicinity I would be more than happy to have them as our guest on the ranch.

MRS. A. K. WINSLOW

Correcting the Quiz . . .

Denver, Colorado

Dear Miss Harris:

Regarding question No. 14 in True or False quiz in October issue: Quiz answer is given as "true" that Gen. Kearny was first American governor of New Mexico.

My information is that Gen. Kearny "on arriving at Santa Fe declared the territory of New Mexico a part of the United States," and that he left Santa Fe on September 25, 1846 for California after appointing Charles Bent first governor of New Mexico.

G. C. DELANO

Dear G.C.D.—Right you are. Quiz editor slipped on this one. Charles Bent was first American civil governor of New Mexico.—L.H.

Dentist's Desert Goes Home . . .

Whittier, California

Dear Mr. Henderson:

I have been a subscriber to your magazine for a full year and I can truthfully say that no publication has ever given me so many hours of genuine pleasure and complete relaxation. It is the only publication that I read in its entirety, even the Gems and Minerals section—and I wouldn't know what a prize mineral was if it was dropped into my lap.

My original intention was to subscribe to your magazine to diversify my office selection of periodicals but I have long since taken them home immediately to read and then put them away in the binder for safe keeping. My wife and I are sincere desert enthusiasts and annually spend two to three weeks on the Colorado and Mojave deserts or in Arizona and New Mexico, but with tire and gasoline rationing we take refuge and comfort from your magazine.

ARTHUR N. MARTIN, D.D.S.

Oldtimers to Greenhorns . . .

Overton, Nevada

Dear Editor:

We are rather kindred spirits of the Souths and follow their adventures with great interest. We differ from them though in that we don't scorn the material completely. For those rare souls like the Souths who can ignore the material completely—yet put up with drudgery and ugliness without letting it impinge—my salutations and deepest respect. But I believe the average person cannot overcome environment to that extent.

You should get a magic carpet sometime and follow copies of your magazine. They go to the most unexpected places and most fascinating people. We have found it and its admirers in 10 western states, Canada and Mexico. The readers of it have a bond of brotherhood almost as powerful as the ancient lodges.

When the magazine is mentioned you will see some phlegmatic seamy face glow with sudden animation—or a lonely woman on the desert wastes speak of the "company" it is to her.

Oldtimers like it because it carries the "Miners' Grapevine" news of places, people and things that they know and talk about when they meet their buddies.

Young people and greenhorns like it because it opens up the romance of the desert—that oldtimers know but won't talk about. It teaches them to be more observant.

Mormons like it and comment on its cleanness. School teachers, cowmen, miners, professors, students—all are admirers of Desert Magazine.

V. L. ALEXANDER

Praise for Charley Brown . . .

Claremont, California

Dear Sir:

I wish to tell you how much I enjoyed the story by William Caruthers, "Better See Charley." It was a very original, unique style, and I have never seen so much put into so few words. One almost gets a picture of Charley's entire career. And incidentally our state would probably be better off if there were more sterling characters like Charley in public offices.

Thank you for an outstanding story. It ought to be passed along to the Reader's Digest.

WILLIAM MEYHM

Randsburg Meteorites . . .

Randsburg, California

Dear Sir:

I surely got a great kick out of your trip in the Miner's Hell (December issue), for I have been all over that mountain range.

Please inform the writer H. H. Nininger ("How to Identify Meteorites" in December issue) that he can see a 25-pound meteorite at the drug store at Randsburg, California. And I have several more out on the ground. My mining claim is 10 miles north of Randsburg on Highway 395.

C. R. WADSWORTH

Desert and Morale . . .

Nampa, Idaho

Dear Mr. Henderson:

As we mail you our check for a renewal to your wonderful magazine, we take this method of thanking you and your staff for the inspiration and comfort it has been to us in the trying year just past.

Somewhere in the scriptures it says, "Lift up your eyes to the hills, from whence cometh thy strength." For those of us who have sons in far away places in danger, the need for strength in the days ahead is great. Magazines like the Desert can do a lot to keep up the morale on the Home Front, and speed the day of winning the war—and winning the peace, which is to us even more important.

MR. and MRS. RICHARD E. HANSON

Rockhound in Hawaii . . .

Hdqtrs. Gen. Hosp., Hawaii

Dear Friend Desert:

This morning I've been lying here wondering about old friends of the Rockies, the desert, lost mines, lost canyons, trips of the past—when only silence and space were mine. Yes, just daydreaming and wondering if by spring I'll be able to once more seek out treasures that wait and glitter in the sun.

Have accumulated some small stuff but from a mineral standpoint these islands are rather barren. Got on to some swell Burma rubies, two earrings of Russian amethyst and also from down Burma way some beautiful Chinese jade.

JACK A. BRIEN

HERE AND THERE...on the Desert

ARIZONA

Generators Turn . . .

PARKER—Three 30,000-kilowatt generators at Parker dam have undergone test runs and are in commercial operation, according to Harold L. Ickes, secretary of the Interior. Power is being sent to California and other points for war industry, mining operations and military use. By May a fourth unit of the same size will put the plant in full operation capacity of 120,000-kilowatts or 600,000,000 kilowatt-hours of electric energy annually.

Work Continued . . .

KINGMAN—Until definite orders are given the Utah Construction company will continue work on Davis dam on the Colorado river a short distance west of here, according to company officials. Late in November Washington officials are said to have told newspaper representatives that work on the dam had been stopped, but representatives of the construction company said they had received no confirmation of this order by late December.

Marriages Show Drop . . .

YUMA—Marriages here show a two-third drop because of gasoline rationing. To be married in Arizona, Southern Californians in most cases must use an eight week's gasoline supply or 32 gallons. In pre-war days S. Mont Smith, clerk of the Yuma county superior court issued 20,000 marriage licenses a year.

Woodmen Convention . . .

NOGALES—The Head Camp of the Woodmen of the World comprising Arizona and New Mexico has selected this border city for its early spring convention. Many notables, including several national officials from Omaha, Nebraska, will be present. A definite date has not been announced.

Forest Visitors Increase . . .

PETRIFIED FOREST—During November the number of visitors to this national monument showed an increase, according to the travel report of the U. S. national park service. A total of 1,740 cars and 5,046 persons visited the forest.

Guayule Project Approved . . .

YUMA—The war production board has approved continued work on the Gila project in Arizona only to the extent necessary to develop guayule. For several months construction has been in progress which will make possible 30,000 acres of irrigated land for guayule rubber in 1943-44. More than 100,000 acres could be made available within a few years.

Navajo Seek Land . . .

WINDOW ROCK—Negotiations are underway to acquire the use of 15,000 acres of land on the Colorado river reservation near Parker for members of the Navajo tribe. The land is needed to accommodate livestock of the expanding population. Mojave tribesmen now live on the Colorado river reservation, which is irrigable and capable of supporting a large number of Navajo, according to James M. Stewart, superintendent of the Navajo agency.

Travel on Horses . . .

TOMBSTONE—Mr. and Mrs. Robert Plummer of Norfolk, Pennsylvania, intend to enjoy Arizona's sunshine, gasoline rationing or no gasoline rationing. Ordered by his doctor to go to a warm, dry climate, Mr. Plummer and his wife have set out on horseback to make the 3,190-mile trip to Tombstone. They expect to arrive sometime in February.

Eastern Silver for Navajo . . .

WINDOW ROCK—Navajo Indians of Arizona and New Mexico still may be able to make jewelry from silver for a short time. A New York firm has offered to supply Indian traders with 100,000 ounces of silver and the United Indian Traders association has placed an order for that amount. About 250,000 ounces are used annually.

H. J. Messinger, former superintendent of the Navajo agency at Tuba City, recently died at El Centro, California. He was 83 years old and had served the government at Window Rock 20 years ago. He was also a member of the Arizona territorial legislature.

Arizona sportsmen may hunt raccoon from November 1 to March 1, state fish and game commission officials have announced, pointing out that few hunters are availing themselves of the opportunity.

Yuma's original marrying justice, Earl C. Freeman, has traded his gavel for a wrench. Today he is a mechanic—building bombers at the huge Consolidated plant in San Diego.

Leo H. Leaden, 51, operator of an Indian trading post at Ash Fork, died December 26 in Tucson.

W. W. Wilson is acting custodian of Navajo national monument, Arizona, filling Jimmie Brewer's place during his service with the armed forces. Katherine and Bill Wilson won countless friends at their Rainbow Lodge, where visitors started the hike to Rainbow bridge.

CALIFORNIA

Prospector's Body Found . . .

EL CENTRO—Search for scrap metal at various mining claims in the desert near Yuma led to the discovery of the body of Forrest Hevrin, 47, veteran prospector, who disappeared July 23, 1942. At the time of his disappearance an intensive search for him was made by ground and air parties, but it was not until his brother Frank Hevrin found an empty canteen and a 50-pound sack of ore samples that he was located.

A WESTERN THRILL

"Courage," a remarkable oil painting 20x60 feet, the Covered Wagon Train crossing the desert in '68. Over a year in painting. On display (free) at Knott's Berry Place where the Boysenberry was introduced to the world and famous for fried chicken dinners with luscious Boysenberry pie.

You'll want (1) A 4-color picture of this huge painting suitable for framing. (2) A 36-page handsomely illustrated souvenir, pictures and original drawings, of Ghost Town Village and story of this roadside stand which grew to a \$600,000 annual business. (3) Two years subscription (12 numbers) to our illustrated bi-monthly magazine of the West. True tales of the days of gold, achievements of westerners today and courageous thoughts for days to come. Mention this paper and enclose one dollar for all three and get authentic western facts. Postpaid. GHOST TOWN NEWS, BUENA PARK, CALIF.



The answer to the war workers' housing problem

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TRAILER COACHES

—Modern Defense Homes—
See Them Today

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So. Calif. Westcraft Distributor
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Los Angeles, California

Feeder Cattle . . .

BLYTHER—Palo Verde valley lands are now pasturing 7,200 head of cattle for Los Angeles markets, Santa Fe officials have announced. To date more than 200 cars have been shipped into the valley from Texas, New Mexico and Arizona. This total compares favorably with last year's high of 213 cars on the same date.

Lettuce Produces Latex . . .

EL CENTRO—Automobile tires, as well as salads and bridge club sandwiches may be made of lettuce. L. G. Goar, superintendent of the Meloland field station of the University of California college of agriculture, has disclosed that tests of three varieties of lettuce showed high contents of latex. One wild variety grown, yielded 29 percent of latex from its stalks as compared with a yield of 25 percent from guayule.

The Desert Trading Post

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—
Actually about 1½ cents per thousand readers.

MISCELLANEOUS

Minerals, fossils, crystals, Indian relics, cypress knees, weapons, curios, etc. Send stamp for list. C. R. Harding, West Fork, Ark.

Desert Tea (Ephedra). Used as a tonic by the Indians. Considered by the Mormons to be possessed of unusual medicinal qualities in the relief of colds, headaches and rheumatic ailments. (See Desert Mag. Aug. 1940. P. 27.) Makes good coffee substitute. Big bundle in original form gathered fresh from desert with full directions for use, only \$1.00 cash or P. O. order. M. Brown, 1224-A 19th St., Santa Monica, Calif.

FOR SALE—12 beautiful perfect prehistoric Indian arrowheads \$1; 10 tiny perfect translucent chalcedony bird arrowheads, \$1; 10 perfect arrowheads from 10 different states, \$1; perfect stone tomahawk, \$1; 4 perfect spearheads, \$1; 5 stone net sinkers, \$1; 10 perfect stemmed fish scalers, \$1; 7 stone line sinkers, \$1; 4 perfect agate bird arrows, \$1; 5 perfect flint drills, \$1; 7 perfect flint awls, \$1; 10 beautiful round head stunning arrowheads, \$1; 4 fine perfect saw edged arrowheads, \$1; 4 fine perfect flying bird arrowheads, \$1; 4 fine perfect drill-pointed arrowheads, \$1; 4 fine perfect queer shaped arrowheads, \$1; 4 rare perfect double notched above a barbed stem base arrowheads, \$1; 5 perfect double notched above a stemmed base arrowheads, \$1; 12 small perfect knife blades of flint, \$1; rare shaped ceremonial flint, \$1; 3 flint chisels, \$1; 7 quartz crystals from graves, \$1; 10 arrowheads of ten different materials including petrified wood, \$1. All of the above 23 offers for \$20. Locations given on all. 100 good grade assorted arrowheads, \$3.00 prepaid. 100 all perfect translucent chalcedony arrowheads in pinkish, red, creamy white, etc., at \$10.00. 100 very fine mixed arrowheads all perfect showy colors and including many rare shapes and types such as drill pointed, double notched, saw edged, queer shapes, etc., location and name of types given, \$25.00 prepaid. List of thousands of other items free. Caddo Trading Post, Glenwood, Arkansas.

Desert Air Plant . . .

THERMAL—Prospects that a large aircraft factory may be erected at the Thermal airport has been announced by government officials. The contemplated factory will be similar to one now operated by Douglas aircraft at Daggett, where planes are converted and remodeled. A concrete marker on the factory site has been set up. It is inscribed: "Property of the U. S. army and Douglas Aircraft company."

City Starts Suit . . .

NEEDLES—This city has started proceedings against the Metropolitan Water district for damages resulting from Colorado river floodwaters, which have inundated several hundred acres of city property. Floods in the area, according to engineers, have resulted from heavy silt deposits in the river channel at Needles, thereby forcing water over banks.

Who Owns Railroad Spur? . . .

NILAND—Shortage of light railroad steel led government officials to investigate an abandoned siding half buried in sand near Frink a short distance north of here. Henry B. Hickey, Jr., WPB official investigated, only to find that the Southern Pacific with which the spur connects doesn't own it and that Imperial county thinks that it does, the side-track having served a county gravel pit many years ago. But at this point Mr. Hickey bumped into a 20-year lease on the track held by the Orange County Gravel company which expires next year. That didn't help much for county records show that when the gravel pit proved too costly, the company said they were through with the plant and wanted nothing more to do with it.

Indians Serving . . .

INDIO—More than 50 Coachella valley Indians are now serving in the U. S. army or navy. Latest to go to the army is Stephen McGee, Cabezon Indian and son of Julian Augustine, little chief of the Cabezon Indians, who lives near Coachella.

Death Valley Hotel Closed . . .

STOVEPIPE WELLS—One of the oldest establishments in Death Valley, Stovepipe Wells, has closed for the duration. The hotel located at the west entrance to the national monument was built by a man who constructed the toll road originally connecting Lone Pine with Death Valley.

New Town Planned . . .

TRONA—The general land office of the U. S. interior department has approved towns site survey and plat of a new town to be named Argus and located near Trona. Public sale of properties will be announced shortly. This will be supervised by Ellis Purlee, register of the district land office, Sacramento.

NEVADA

White Way Goes Dark . . .

LAS VEGAS—The glowing white way of downtown Las Vegas known across the nation as the "last frontier" now goes dark at 2 a. m. each night and will continue to do so until the war ends conforming to a request made by General John L. DeWitt. All gambling houses will close at the same hour in an effort to alleviate a man-hour loss problem at the magnesium plant near here described as the "blackest on the Pacific coast."

Brucite Township . . .

GABBS VALLEY—Nye county officials are planning to establish Gabbs Valley as a new town to be named Brucite. A justice of the peace office may be opened to eliminate the necessity of Tonopah officers making lengthy trips to the community to conduct court.

OPPORTUNITY

Assortment of 8 polished slabs all different or 8 cabochons all different \$1.90. String of rare opalized Indian grave beads 48 inches long with data \$1.95. Absolute satisfaction guaranteed. P. Smith, Sr., 2003 59th St., Sacramento, Calif.

FOR SALE—Famous and profitable oasis and acres in the desert on Highway 80. If you like independence, dignity, serenity, security, and freedom from the crowded world's worries, plus a home and business in the desert, here it is. Built and operated by present owner, who has made enough to retire. Very unique, artistic, spacious and comfortable. Easy for two people to operate. Profit is 50%. Now paying better than ever and will continue so throughout war period. This outstanding property has never before been offered for sale. A real chance for a couple to acquire something solid and to enjoy desert life while amassing a little fortune. Price, \$10,000; \$5,000 down. Write Box 1377, Yuma, Arizona, for full details.

LIVESTOCK

KARAKULS producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further information write Addis Kelley, 4637 E. 52 Place, Maywood, California.

Karakul Sheep from our Breeding Ranch are especially bred to thrive on the natural feed of the Desert. For information write James Yoakam, Leading Breeder, 1128 No. Hill Ave., Pasadena, California.

REAL ESTATE

For Imperial Valley Farms —

W. E. HANCOCK

"The Farm Land Man"

Since 1914

El CENTRO — — — CALIFORNIA

Seek More Land Grants . . .

PIOCHE—Surveyor General Wayne McLeod has announced that he will propose that the next session of Nevada's legislature ask for additional land grants. Nevada's grant is far below that received by public land states, the last being approved by congress June 16, 1880. Had Nevada received a grant proportionate to the other western states she would have received an excess of 6,000,000 acres instead of the 2,734,158 acres she now has, he declared.

Catfish Planted . . .

AUSTIN—If the meat shortage lasts for two years, residents along Reese river will have an ample supply of catfish. Through the fish and game commission more than 25,000 fingerlings have been planted in the stream.

Nevada Editor Dies . . .

VIRGINIA CITY—Vincent Nevin, editor of the Virginia City News and a native of the Comstock, died December 5. Nevin was well-known throughout Nevada and in mining circles. At various times he was employed on the Goldfield and Tonopah newspapers.

Ship Named Key Pittman . . .

CARSON CITY—Honoring Nevada's late U. S. senator, a 10,000-ton merchant ship, the Key Pittman, slid down ways at a west coast shipyard during December. Three Nevada boys Elwood Benner, 12, of Gerlach; Bob Elquist, 13, of Beowawe, and J. Whipple, 16, of Overton were on hand for the event as sponsors. Key Pittman was one of Nevada's most noted congressmen.

Trout for Nevada . . .

LAS VEGAS—Fingerling trout to be planted in icy clear waters of the Colorado below Boulder dam have been brought here from the hatchery at Springville, Utah. Rainbow trout to be planted number 32,000.

Livestock throughout Nevada generally is below average condition because of a long dry spell. Range conditions also have been affected by lack of precipitation at the right time.

Dr. William Henry Hood, 81, practicing physician in Nevada since 1886, died November 29 in Reno. The doctor first settled at Battle Mountain, where he practiced from 1886 to 1904, when he moved to Reno.

Nevada looks forward to an increase of 15 percent in the beekeeping industry during the next few years, the biennial report of the state apiary commission reveals. Many new beekeepers are expected to begin operations on a commercial basis because of wartime demands for honey and wax.

NEW MEXICO

Help for Cold Motor . . .

GALLUP—A Navajo Indian searching for an idea to make it easier to start his car on frosty mornings listened to a tip given by a neighboring New Mexico rancher. He advised the Indian to place a big rooster in a burlap bag and put the chicken under the car hood at night. The rancher said the heat from the bird warmed the engine, making it easy to start. The Indian substituted a small goat for the rooster. The engine stayed warm, but the spark plug wires and part of the fan were missing next morning. The goat must have been hungry.

Chee Dodge Elected . . .

GALLUP—Henry Chee Dodge, 80, Navajo Indian leader, has been chosen again for the post of Navajo tribal council chairman. He heads 50,000 Navajo, the largest Indian tribe in the country, after defeating Sam Ahkeah of Shiprock in a run-off election. Immediately after election Dodge declared that he would not accept a penny of the \$200-a-month salary. It will be turned over to the tribe to be used in staging barbecues and in providing other entertainment for Indians attending council meetings. Dodge is probably one of the wealthiest Navajo.

Private Dares Curse . . .

GRANTS—From Fort MacArthur, California, comes the story of how Private Rosary Folba did what nine other army barbers would not do—he defied an old Indian death curse and snipped the three and one-half foot tresses of newly inducted Claw Neskai, 22-year-old Navajo. Neskai asserted upon arrival at the fort, "When I was a little boy, my grandmother made me promise never to cut my hair. She placed a curse of death on whoever should cut my hair. I'm not afraid myself, but the man who cuts my hair will die." Nine barbers declined the job. Private Folba said, "Aw baloney," and unwound the bun atop Neskai's head.

Old Warrant Revealed . . .

SANTA FE—Representatives of the New Mexico historical society are examining a 57-year-old state warrant for \$50 dating back to Apache Indian raids of May and June, 1885. The warrant was forwarded to Governor Miles by Mort Wein of Dos Cabezas, Arizona, and was approved for payment for services during the Indian uprising. It is the property of Mrs. R. B. Mitchell. Payment was not made in early days because existing appropriations were insufficient to meet it. Now Governor Miles said it would take a special act of the legislature to pay the bill and that it is more interesting to collectors.

Personnel of the Navajo central agency no longer will roam the 16,000,000-acre Navajo reservation by airplane. The planes have been grounded for the duration.

UTAH

Beet Leader Optimistic . . .

LOGAN—Douglas E. Scalley, president of the United States Beet Sugar company is optimistic concerning prospects for the industry next year and for future years. Returning from Washington, he pointed out that demands in future months will show continued increase.

Electric Plant Ready . . .

BEAVER—This city's new hydro-electric plant in Beaver canyon is nearing completion despite difficulty experienced in obtaining lumber and other materials needed in the war effort. A 10,000-foot penstock has been tested and declared "okay." Transformers also are being installed and it was expected that the plant would be in operation by January.

29 PALMS INN

THE HOTEL AT THE
PALMS
FIREPLACE ADOBES
FOOD TO REMEMBER
SADDLE HORSES
BADMINTON
AMERICAN PLAN
Single \$6.00 up
Double \$10.25 up
Gateway to Joshua Tree National Monument
ROBERT VAN LAHR, Manager
Reservations — write 29 Palms Inn at
Twentynine Palms, Calif., or call any Travel
Bureau or Automobile Club.



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Its news about Rodeos and Roundups is the most authoritative of any published in America. Rodeo Association bulletin and Cowboy's Turtle Association news are published monthly.

Those who enjoy poetry of the Old West will revel in the abundance of truly typical poetry that appears in each issue of Hoofs and Horns. You'll like Hoofs and Horns!

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RUINS IN NEW MEXICO

Who can identify this picture?



PRIZE CONTEST ANNOUNCEMENT . . .

This month's Landmark photograph pictures the ruins of a building which has figured in several chapters of American history.

What are some of the events which have taken place here? For how long was it occupied and by whom? In what kind of an area is the landmark located? What is its status today?

So that Desert Magazine can present all possible facts concerning these ruins

a prize of \$5.00 will be awarded the person who submits the most complete, accurate and interesting manuscript of not more than 500 words.

Manuscript should contain historical information, description, location and accessibility and as much other pertinent material as is available.

Entries should be addressed to Landmarks Contest, Desert Magazine, El Centro, California. To be eligible they must reach this office by February 20, 1943. The winning story will be published in the April issue.

. . .

MIRAGE PHOTO CONTEST . . .

There is still time to enter Desert Magazine's Mirage photo contest. Contest is limited to photographs of mirages taken on the Southwest desert, and those submitting accepted photos will be awarded \$3.00 each. Following are contest rules:

1—Contest open to amateur and professional photographers; no restriction as to residence.

2—Prints should be at least 5x7 inches, glossy black and white, unmounted, with strong contrast. Do not submit copyrighted photos.

3—No limit as to number of photos submitted. Prints must reach Desert Magazine office by February 15, 1943.

4—Winners will be announced within 10 days of contest date. Non-winning photos will be returned only if postage accompanies entry.

Address entries to: Mirage Contest, Desert Magazine, El Centro, California.

Sez Hard Rock Shorty of Death Valley

By LON GARRISON



"I just been readin' a dude outfit-tin' catalogue," began Hard Rock Shorty, "an' it was really somethin' to look at! What the well dressed dude'll be wearin' next year'd surprise you. He'll have ever' thin' but shoes an' a canteen!"

Hard Rock studied a while upon the foolish things people bought out of catalogues.

"Yes sir—air conditioned pants—refrigerated hat—a pack sack that weighs less the more you put in it—a balloon mattress—a parachute for hoppin' off of cliffs with—a combination watch compass, an' pocket radio—even fancy dried food that's guaranteed to soak up ever' bit o' water you got in you if you eat it. About as practical as a set o' water wings in a sand storm! Reminds me o' the dude I met over in the Panamints one time.

"He had a big pack sack with ever'thin' in it but a baby grand piano, an' he was just as proud as a pet pig about it all. He spent a hour an' a half showin' me how it all worked. His can opener turned around into a parin' knife. His sleepin' bag could be made into a tent. His kettles was all nested together fine except that he'd spilled the syrup an' they was stuck so tight he couldn't get 'em loose. I looked the outfit all over careful an' then I said, 'Well, fur as I can see you got ever'thin' but a deck o' cards.'

"'Cards?' he says. 'Cards? What'd I want cards for?'

"'Just in case you get lost,' I tells him. 'If you get lost, all you got to do is take the cards out an' sit down by a rock or a stump an' start playin' solitaire. Inside o' five minutes somebody'll be lookin' over your shoulder tellin' you how to play an' you can ask 'em how to get back home.'"

ANSWERS TO TRUE OR FALSE

Questions are on page 14.

- 1—True.
- 2—False. The chuckawalla is not venomous.
- 3—False. The smoke tree blossom is deep purple.
- 4—True.
- 5—False. No specimens may be taken from Petrified Forest national monument.
- 6—True. 7—True. 8—True.
- 9—False. The Mojave has no outlet except a series of desert playas.
- 10—True.
- 11—False. Calcite is 3 and quartz is 7.
- 12—False. Esteban was killed by the Zuni.
- 13—True. 14—True.
- 15—False. The prehistoric sloth was a vegetarian.
- 16—False. The native home of the Kaibab squirrel is the Kaibab plateau.
- 17—False. The atlatl was a weapon for killing game.
- 18—True.
- 19—False. "I Married a Ranger" was written by Mrs. White Mountain Smith.
- 20—False. When Carlsbad caverns were discovered a vertical shaft led down to the entrance and no evidence has been found of prehistoric habitation.

GEMS AND MINERALS

ARTHUR L. EATON, Editor

IMPERIAL COUNTY RANKS AS MINERAL PRODUCER

Walter W. Bradley, California state mineralogist, and his associates in the California division of mines, have made a very notable contribution both to the national war effort and to the mineralogical development of the Colorado desert in their latest report on the mineral resources of Imperial county, California, and the Cargo Muchacho mountains in the same county.

This report lists some eight or ten valuable metals being worked commercially, and 17 non-metals. Among the metals are listed copper, gold, iron, lead, silver, manganese and nickel; among the non-metals, clay, dumortierite, kyanite, feldspar, turquoise gypsum, lime and marble, pumice, pyrophyllite, salt, sericite, silica, strontium, sulphur and carbon dioxide gas.

Most persons regard Imperial county as a desert locality devoted strictly to agricultural products. The county's agriculture has become so famous throughout the nation that few think of it as an important mining center, but a county which has produced as much as \$687,995 worth of gold, besides many other minerals, in a single year is at least noteworthy.

Another industry which is rapidly reaching first rate proportions is that of carbon dioxide and dry ice. From its beginning in 1933, the industry has reached national importance. Dry ice, almost unknown 10 years ago to the average person, is now an article of daily use.

LAVA CAP GOLD MINE GIVEN PRIORITY RATING

Iron sulphides in gold ore mined by Lava Cap gold mining corporation, in Nevada City, have become a benefit instead of a nuisance because the sulphides are used as a flux in smelting lead, an essential mineral. Lava Cap was not closed down with other gold mines, but was given priority rating.

Rising from third place in California production, Lava Cap now claims to be the foremost gold producer in America. Three hundred men are employed, and the company expects soon to add another hundred. Among other by-products, about 40 tons of arsenic are recovered monthly from the concentrates.

KILAUEA PHENOMENON PRODUCES OBSIDIAN "HAIR"

One of the strangest phenomena of the Territory of Hawaii, has been known since the earliest days and explained in a great variety of ways. This is a lava formation known to the natives as "Pele's hair."

Thin threads or fibers, some of them even tubular, rise from the surface of the boiling lava in Kilauea volcano, and seem to hang in the atmosphere or blow about with the wind. The wind even carries great masses of the "hair" out of the crater and scatters it down wind over the sides of the mountain. The rising fibers cool rapidly as they start their journey, into a type of obsidian.

SOUTHWEST MINERALOGISTS SUMMARIZE OBJECTIVES

Southwest mineralogists, Los Angeles, have decided to postpone any change in schedule as long as possible. No field trips are scheduled for the near future. A few members recently hunted moonstones at Redondo Beach.

Standing committee chairmen rendered semi-annual reports at December meeting. Some important objectives accomplished were: revision of the constitution and bylaws; incorporation; formation of a study group; appointment of a chairman for each month to arrange for speakers, and take charge of refreshments and raffling of specimens, to augment funds; listing of locations visited on field trips; and filing specimens in display cabinet; and a successful annual exhibit.

A few specimens of andalusite, variety chiasolite, have been picked up on the surface of the desert, in Imperial county, California. The hardness is above seven and specific gravity 3.2. Very few are of gem quality as the interior figure is seldom distinct.

YANKS SEND HOME AUSTRALIAN OPALS

Among the many gifts American soldiers in Australia are sending home to their wives, sweethearts and mothers are black opals, which they purchase in stores by the hundreds. War-time Australia considers the mounting of precious stones as a non-essential industry, so Yanks buy them unmounted and send them home to be put into rings, pendants and brooches. Most stones cost only a few dollars.

Boomerangs used by Australian natives also are selling rapidly. Instructions accompany each boomerang, as the manufacturers do not approve of throwers getting "conked on the bean." They sell as cheaply as \$1.25. In addition soldiers are buying collections of aboriginal weapons which have collected dust on the shelves of big stores for years.

PHOENIX CLUB HEARS PALEONTOLOGIST TALK

A resume of the earth's history as revealed in stone was presented by Charles E. Wilson, paleontologist, at the December 3 meeting of the Mineralogical Society of Arizona, Phoenix. The lecture was illustrated by choice characteristic specimens which were effectively displayed by the speaker. On December 17 F. Lee Kirby, supervisor of the Tonto national forest gave an illustrated lecture on his work explaining many things which rockhounds see in forest areas but do not understand.

Labradorite is a variety of feldspar. This stone was first found in Labrador. It has been found in many localities, and is admired because of its remarkable sheen and beautiful peacock colors.

THE BOOK SHELF! . . .

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LEAD RESERVES IN ARIZONA ARE LARGE

Lead reserves estimated by the Arizona state planning board to be 148,000,000 pounds underlie that state's terrain, according to a survey conducted by the group. By districts the estimates show Tombstone, 8,000,000; Patagonia, 10,000,000; Aravaipa, 20,000,000; Dripping Springs, 20,000,000; Cerbat range, 60,000,000; Walapai, 10,000,000, and miscellaneous, 20,000,000.

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AMONG THE ROCK HUNTERS

Pacific mineral society, Los Angeles, enjoyed a Christmas party December 11 with gift wrapped rock specimens for Santa to distribute. President Dean De Voe spoke on the growth and aims of Pacific mineral society, past and future trips, and what the group hopes to accomplish. Tom Harrison was in charge of the month's specimen display.

R. H. Harris, chief inspector Morrow aircraft corporation, gave an interesting talk to Orange Belt mineralogical society December 3, on increasing use of wood substitutes for strategic minerals. He showed samples of fabricated wood to illustrate methods of forming and shaping, and also kinds of glue used, and different ways of testing for strength.

Roy Wagoner donated several howlite slabs and polished geodes to Long Beach society to be raffled.

Recent increase from \$24 to \$30 in the price of tungsten has caused tungsten mine and claim owners to hasten development of properties from California and Nevada south to Lower California and northern Mexico. Skilled miners can be hired in Mexico for three or four pesos per day. (Five pesos equal one dollar.) Mine operators in the Southwest state that there is an urgent need in this country for about 5,000 Mexican miners.

Comstock lode, Virginia City, Nevada, was exempted from the order which stopped gold mining, because of the need for silver, and the ages of the Comstock mine workers. Comstock lode has been producing gold and silver for over 80 years.

Mineralogical society of southern Nevada has divided into three groups, one group meeting in Boulder City, one in the townsite of Basic Magnesium, Inc., and one in Las Vegas, all units operating under the parent body of the society. Activities for the duration will consist of get togethers to discuss gem cutting and rocks in general.

December Mineral Notes and News, official publication of California Federation of mineralogical societies, has an article on sard and carnelian by Isabel Packwood Westcott of Hanford, California.

M. W. Wall, of 10 High street, Boston, Massachusetts, is very anxious to trade far eastern minerals, including New Jersey minerals, for specimens from the far West. He is especially interested in samples of Myerhoffite.

A recent request has been made by agencies of the federal government for perfect, clear crystals of quartz, above one half inch in diameter, for use in short wave radio sets for the military forces.

John L. Walters of Harbor Springs, Michigan has contributed some interesting fossil rocks to Desert Magazine's rock collection. The specimens are from the glacial drift of Emmet county, Michigan. They include *Acerularia davidsoni* (Petoskey stone), *Favosites alpenensis* (Honeycomb coral), *Halysites catenularia* (Chain coral), *Zaphrentis tetracoral* (Horn coral), *Stromatopora*, *Heliotes* and *Streptelasma*.

The Hawaiian islands have been gradually built up by volcanic action from a point about 16,000 feet below the level of the ocean, to the highest summit of Mauna Kea, 13,823 feet above. By adding these two figures together, Mauna Kea today stands 29,823 feet above the original crack in the ocean floor, about 800 feet greater than Mt. Everest, the highest mountain in the world. Mauna Loa is the largest active volcano in the world.

Frank Merriell, Colorado river authority, was principal speaker at December 7 meeting of Grand Junction, Colorado, mineralogical society. He talked on the proposed Dewey dam in eastern Utah, and its connection with magnesium deposits in eastern Utah and western Colorado, classed among the richest ever discovered.

Jack de Ment, Portland, Oregon, has originated a process for testing gas masks by fluorescence. Powdered anthracene, or some other fluorescent chemical, is allowed to filter into the chamber under mild pressure. It is thus possible to detect leaks and determine where they occur, whether in the fabric, mechanisms or seams. Fluorescent liquids or vapor may be used, depending on the type of mask.

COLORFUL MINERALS

GOLDEN CALCITE

The tri-state area of Missouri, Kansas and Oklahoma has produced some of the finest golden calcite crystals in the world. A few of these fine crystals have been found in California and other western states, but not a large total. Most of these are dog tooth spar in sizes from very small to very large, single crystals and groups of all sizes. Many are doubly terminated. The rich golden color make them an addition to any collection. For those who are more interested in fluorescence, many crystals produce a brilliant scarlet color under the black bulb.

ANTIMONY NEEDED IN ARMAMENTS PROGRAM

Antimony, named a strategic mineral by the federal government has shown an advance in price, but has not reached the high point of the last war. Prices for this metal fluctuate, and are unusually high during war. They normally run from eight to 16 cents, but at the time of the first world war went to 46 cents per pound. China and Japan were chief producers, but now Mexico supplies a good deal. The largest proportion used by the United States is imported. Antimony is of sulfatary origin, volatile, No. 1 in the scale of fusibility, and is closely associated with arsenic, cinnabar, sulphur and bismuth. It is used principally for type metal, babbitt metal, metallic ornaments and toys, and battery plates.

Moss agates and petrified wood are found in the southwest corner of Salt Lake valley, south of Butterfield canyon, as well as red and yellow jasper. And while there, do not fail to climb to the top of Step mountain, this valley's only volcanic plug.

A mineral that is composed of sulphur and iron is a sulphide of iron. This belongs to the class of sulphides which includes the simple combinations of the element sulphur with the various metals.

Frank and Grace Morse, "rambling rock nuts" of Bayfield, Colorado, have completed their museum. Frank did all the work himself except plumbing and wiring. A well equipped shop will be added by spring, with three 4-foot mud saws, two 3-foot ones and several 2-foot ones.

W. Scott Lewis' December bulletin contains, in addition to the usual news about mineral bargains, a life history of Percy the caterpillar, who ate voraciously and finally metamorphosed into a beautiful monarch butterfly.

East Bay mineral society enjoyed a pot luck dinner, December 3. They exchanged gift wrapped specimens. A gasless field trip, led by the Lewises' with kodachrome slides, took the group to Death Valley and Nevada.

E. W. Davis presented Searles Lake gem and mineral society a five by eight foot American flag. A. P. and C. C. donated a pole to be placed at the Trona club house. The state guard and American Legion participated in the flag raising ceremony. Twelve Searles Lake members are serving in the armed forces.

David B. Scott, western sales manager for A. P. and C. C., past president of Southern California mineral society of Pasadena, reviewed the history of mineral collecting in the West, at November meeting of Searles Lake gem and mineral society. There are now about 70 societies in the five western states.

East Bay bulletin states that a good dopping wax, one from which the stone can be removed only by holding it in boiling water, can be made by melting in a glue pot or double boiler about equal parts of dry pitch, dry flake orange shellac and resin. If the stone tends to slip from heat or buff or sander, add shellac to mixture; if it tends to pop off, add resin. Dopping: roll small piece of wax on cold metal plate to give tapered effect. Heat stones in pan which has a film of wax over bottom.

Searles Lake bulletin for December wears a cover picturing a lone rockhound cooking his supper over a campfire. He undoubtedly reached the site on foot, as no auto or burro is in sight.

Long Beach mineralogical society installed new officers at their Christmas party December 11. The Long Beach club chooses officers in a manner different from most other groups. They elect a board of directors, who meet with the retiring board to elect officers for the ensuing year. Current board is Lowell Gordon, E. S. Bond, V. P. Cutler, Milo Potter and Roy Wagoner.

Santa Monica gemological society has a new meeting place, a room in the Windemere hotel, 1431 Ocean avenue, Santa Monica.

Now that the heavy Christmas mail is off Uncle Sam's hands, rockhounds can again feel free to exchange specimens or purchase new rocks from dealers, and have reasonably prompt delivery.

Pvt. David D. Dougan, S.G.D. 614, B.T.C. No. 5, AFTTC, Kearns, Utah, a former rockhound from California, would like to get acquainted with Utah collectors.

Montana society of natural and earth sciences scheduled their annual rock show and convention for January 14 and 15 at Bozeman, Montana. A special young people's section was to feature the exhibits. All prize-winning specimens were to be determined by public ballot.

Cogitations . . .

Of a Rockhound

By LOUISE EATON

• Desert rockhounds has to contend with lots uv conditions that never trubbles folkses in uther places. Most specifically therz bugs 'n dust storms 'n houses without adequate heat for the few cold days. When the mercury says 80 or 90 in the afternoon 'n 23 at nite, therz quite a bit uv bodily adjustin' to be accomplished.

But bugs is probably the wurst nuisance. Most people thinks that the cucaracha is justa song 'n dance, but desert dwellers knows what sly, sneakin', scur-ryin' bugs they really is—not even mentioned elsewhere in p'lite society—cockroaches. They comz in assorted sizes, from almost transparent quarter inchers to granddaddys capable uv luggin' off a whole crust uv bread. The big ones is nastily squashy to step on too.

In summer bugs is so ubiquitous that they obscures street lites. They gets in the butter; they gets in your hair, bed 'n coffee. Centipedes is especially fond uv beds besides those varieties uv bugs that uses flour 'n cornmeal for their natural habitats.

Desert rockhounds deserves th' blessin' they get cause after all theres much un-comfort to be endured.

The word "orpiment" is derived from two Greek words—Aura Pigment—meaning gold paint. It is said that in ancient Egypt it was used as a mark of distinction to gild the buttons and epaulets of the nobility and high ranking soldiers. Being of arsenical composition, it is seldom used now for paint making, but yellow ochre is used instead.

Oxygen, the largest constituent of the materials of the earth, combined with one or more of the metals, forms an oxide. United with silicon, oxygen forms with the metallic elements, the minerals belonging to the large and important group called the silicates.

TWO LEGGED ANNIE MULE

By LOUISE McMAHAN

The Rock Hounds are a kind of desert rat That go to bed with a stick in their back. They look all day for different rocks And crawl in at night with holes in their socks.

They look for geodes, shells and iceland spar. They meet at lunch and it's "What have you thar,

Look what I found, all pointed and clear It must be Tourmaline, isn't it dear?"

They look for fluorite and chalcedony roses. They walk and they climb till they've corns on their toeses.

There's amethyst, jasper and calcite galore, They seek and they hunt but always want more.

There's agate from California and Arizona too There's copper and turquoise both of them blue, There are sand spikes and fossils and mica so thin,

There is opalized wood, sardonyx and tin.

I hiked with 'em once and was sore for a week. I ached all over, from my head to my feet. But I'll don my shirt and my old blue pants And go Rock Hounding again . . . When I get a chance.

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AMATEUR GEM CUTTER

This page of Desert Magazine is for those who have, or aspire to have, their own gem cutting and polishing equipment. Lelande Quick, who conducts this department, is former president of the Los Angeles Lapidary society. He will be glad to answer questions in connections with your lapidary work. Queries should be addressed to Desert Magazine, El Centro, California.

By LELANDE QUICK

Have you ever noticed how grooved are the habits of amateur lapidaries? A person's future field of gem interest is rather solidly conditioned by his first gem cutting experience. That is to say if the first stone an amateur cuts happens to be a cabochon he becomes a fixed cabochon cutter; if his first attempt is a slab then he is irrevocably a slab man. The same idea applies to kinds of material; if a first cabochon is of jasper it is forever after a favorite with that man; if it is a slab of wood he can go into transports of delight over the dullest looking silicified limb cast. I have had cutters show me a display of hundreds of good cabochons who have never polished a cabinet specimen on one side or done a slab and I know prize-winning "flat" polishers who have never attempted a cabochon.

There are relatively few all-around amateur lapidaries—folks who can make an opal ring-set, an agate heart or cross, an onyx clock-mount, a pair of jasper bookends or a matched set of bracelet stones. Too many amateurs get in a groove and in time their interest lags for it is not renewed by attempts at new things. The situation can be reversed too. I have in mind two friends who decided gem cutting would be a fine hobby. They built a joint shop and gathered together everything that money could buy—grinders, polishers, diamond and mud saws, faceting heads, every kind of grit and polishing agent and a ton of fine materials from all the dealers. They then proceeded to run the gamut of materials and gem types. In six months they both took prizes for their varied and excellent display—and they have ground nothing since. They sort of burned the dop-stick at both ends.

Now we are all stationary, with field trips suspended and with large quantities of rock we are "saving." Why not use some of it by changing the pace? Let the cabochon maker teach his neighbor flat polisher the joys of turning out a perfect ring-set; let the slab artist bring the thrill of a pictured scene in a piece of petrified wood to the meticulous ring-set and pendant cutter. Try some novelties such as spheres, ash trays, pen stands, bookends, clocks, etc. I have always thought that the acme of satisfaction in lapidary work does not come to a man until he sees his first finished faceted stone ready to take off the dop. I think I'll try it.

Exactness is not too important in differentiating between precious and semi-precious stones. Almost one hundred times in a hundred any gem cut by an amateur will be semi-precious. Commercially, "precious" stones are those which are in constant demand and whose value is high—the diamond, ruby, sapphire, emerald, pearl and black opal. Obviously anyone with a combination of enough courage, skill and money to cut any of these (except the pearl) would not be an amateur. All other stones are semi-precious although the commercial understanding of the term applies principally to the less valuable faceted gems such as the zircons, tourmalines, aquamarine and quartz varieties. Their demand fluctuates with the whims of fashion and they do not command great prices. Rarity alone does not promote a high price. For instance emeralds are not nearly as rare as quality chrysoprase and what is rarer than a good piece of myrickite? Yet a good emerald of average size would probably be worth as much as all of the myrickite in existence plus

much of the chrysoprase because the demand for the emerald is constant while most people are unfamiliar with chrysoprase and myrickite is practically unknown to even professional lapidaries.

Several people have asked me if I know how the Chinese carve their jade and carnelian figures. I know nothing about it beyond the little I have written and I never have been able to find anything in the literature. Can any reader refer me to anything helpful?

Once in a while I get inquiries about minerals which I try to answer by personal correspondence but that is Arthur Eaton's department. I seem to get by on gem cutting inquiries and I hope you will confine your questions to me to gems and gem materials. Incidentally I personally answer every letter I receive and I hope to get many more although I find it difficult at times to keep up with the mail that has been coming in. It is a happy experience and I am grateful for the many encouraging letters I have had.

That eminent mineralogist E. Mitchell Gunnell of Denver reminds me that diamonds also have been found in place in Arkansas as well as in California.

Several want to know how to drill hearts and pendants. J. Howard McCornack will present details and a diagram here in an early issue of a new device he and H. L. Monlux have developed for this task.

DID YOU KNOW . . .

- Amber is not always yellow; it may be white, black, blue or red although these shades are rare.
- Quartz gems are found in the rocks of every age; in igneous, sedimentary and metamorphic formations.
- Mohammed wore an agate signet ring.
- Satin spar may be either a fibrous variety of gypsum or calcite.
- Rhodochrosite will effervesce when acids are applied; hodonite will not.

LAPIDARY HELPS AND HINTS . . .

Have a large cigar can three quarters full of sand into which you stick your dopped stones for "setting" or to keep them out of the way. Have another with a little oil mixed with the sand into which you can stick your pen-knife, screw driver and other small tools for easy grabbing. The oil keeps them from rusting.

Dissolve ten level teaspoonfuls of common salt in a tumbler of water and put your amber in it. If it floats it really is amber, if it sinks it is probably bakelite or some other substitute.

When you think a diamond saw blade is finished take a light hammer and tap gently along the periphery to expose the bort. It will not last a great while longer but it can be repeated several times and thus give a lot of prolonged life to the blade.

Mines and Mining . .

Salt Lake City, Utah . . .

The American Potash company may soon take over interests of the Utah Magnesium company in more than 100,000 acres of land containing deposits of magnesium, potash and oil in the vicinity of Thompsons, Utah. The potash company, now operating a refining plant at Carlsbad, New Mexico, will begin immediate development as a private enterprise without government aid, it is reported. Kaiser interests also are said to be investigating the Utah field. Drilling operations are continuing favorably at the Great Lakes Carbon corporation well in lower Moab valley, being cored by the Mack Drilling company.

Goldfield, Nevada . . .

Mining operations in southern Nevada appear encouraging despite governmental requirements for manpower and transportation, according to a survey recently completed by Goldfield mining men. The Goodsprings area in particular is moving to the fore as a producer of vanadium and zinc. Four mines operating in that region are the Argentine, Hoodoo, Whale and Alice properties. Federal plans to purchase zinc produced near Goodsprings are rapidly taking form, it was also disclosed, although definite arrangements have not been completed.

Winnemucca, Nevada . . .

Approximately \$30,000 has been spent in improving the Defense Tungsten mine near here during the past few months, according to Carl Wagoner, one of the operators. A 60 to 75-ton mill was rebuilt and put in operation early in January. Twelve men are employed at the property with one shift working each day. Three shifts will be worked soon.

Parker, Arizona . . .

Arizona and Southern California producers now can be served by a small-lot manganese and chrome stockpile established here by the Metals Reserve corporation, according to Charles F. Willis, consultant for the metals organization. Facilities will be available to those in the district between Wickenburg, Arizona, and the California state line as well as in Southern California.

San Francisco, California . . .

War production board officials have announced that operators of gold mines shut down by government order are forbidden to make private sales of machinery and equipment. Owners must file an itemized list of machinery and equipment with the board indicating items for sale or rental.

Phoenix, Arizona . . .

Peace-time production at the Phoenix aluminum plant now under construction for the Aluminum Company of America is planned, according to officials of that company. The plant at conclusion of the war will be on the threshold of a tremendous backlog of work to meet civilian needs restricted by war and to produce aluminum for a multitude of new uses which have been developed. The plant will be placed in operation early next summer.

Boulder City, Nevada . . .

It's like carrying coals to Newcastle . . . But back to this great silver producing state came 141.7 tons of silver—fabricated into bus bars at Baltimore. F. O. Case, general manager of Basic Magnesium's new \$100,000,000 plant, said it was the first of a shipment of 800 tons which will replace copper in the plant's construction.

Morenci, Arizona . . .

A new city of modern homes, named Stargo, is rapidly growing near here and is housing workers at Phelps Dodge corporation's huge open-pit copper mine and reduction works. About 225 family dwelling units are complete and another \$200,000 expenditure for 20 new homes and 20 duplexes has been authorized.

Virginia City, Nevada . . .

America's most famous mine the Comstock will remain in operation now that it has been exempted from the war production board's order closing gold mines. Closure of this property would doom the existence of Virginia City hence the Comstock exemption, according to Representative James G. Scrugham. Ninety-seven percent of the mine's output is silver and most of the men employed there are elderly, according to testimony presented to the federal board.

Battle Mountain, Nevada . . .

Contemplated improvement work at the Copper Queen mine near here includes erection of a compressor room, installation of air lines to the Copper King and Copper Queen shafts as well as repairs on all buildings to house workers. Development work planned includes cross-cutting on the 200-foot level to the hanging wall on the Queen Shaft and a 100-foot drift around a caved portion of the mine to get underneath the ore body on the 120-foot level. Prospecting will be done by diamond drilling.

Washington, D. C. . . .

Cordell Hull, secretary of state, early in December filed a formal request with Mexico to import 3,000 trained Mexican miners. The laborers will come to the United States to relieve a critical labor shortage, he declared, pointing out that a minimum of 2,500 new workers are needed immediately for copper and other non-ferrous mines of Utah, Arizona, New Mexico, Montana, Colorado, Nevada and California.

Phoenix, Arizona . . .

Silver production in this state in 1941 totaled 7,551,000 fine ounces valued at \$5,369,600 or seven percent increase over 1940, the U. S. bureau of mines has announced. The increase resulted from a gain in production from the United Verde, Trench-Flux, New Cornelia and Magma mines.

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THE *Desert* MAGAZINE

636 State Street — El Centro, California



By RANDALL HENDERSON

BETWEEN my military duties as Public Relations officer at Hobbs Army Air Field in New Mexico, and the restrictions on gasoline—soldiers have the same gas rations as civilians—I haven't had much opportunity to prow around this part of the desert country.

But recently there was a free weekend, and with several other men from the field I followed the paved highway up Walnut canyon to Carlsbad caverns and spent five hours in the world's greatest natural air raid shelter.

Not that we need shelter from enemy bombs out here on these New Mexico prairies—but Nature chose this spot for one of her most interesting geological formations, and as far as I am concerned it was a wise choice.

New Mexico really is entitled to some compensation for the millions of acres of unproductive limestone terrain which fell to the lot of this state when the boundary lines were established. And since a cavern such as Carlsbad could occur only in a limestone formation, it is entirely fitting that it should be in New Mexico.

* * *

There were over 900 visitors at the caverns the day I was there. Texas led the breakdown by states, with New Mexico second and California third.

More than half the visitors were soldiers from the camps in this area. While the normal guide fee for the trip through the caves is \$1.50, men in uniform are given passes. Thousands of boys from all over the United States, who are camped at the numerous army posts in this region, are taking advantage of the opportunity to visit Carlsbad. Such a trip is one of the many beneficial by-products of military service.

Park Superintendent Boles, who by reason of his long seniority at this park assignment, is addressed by his friends as "colonel," told me that 900 people in one day is a small weekend crowd at these caverns. The park rangers here have guided as many as 4,000 visitors through the labyrinth of stalactites and stalagmites in a single day.

Most of the caves and caverns in the Southwest disclose evidence of former Indian habitation. But the rangers told me that no artifacts ever had been discovered in Carlsbad. The explanation is that when first discovered, entrance was possible only by way of a deep vertical shaft impossible to descend without ropes and equipment. Millions of bats made their home in these dark caverns—but no Indian ever found his way down the shaft. Or, if he did, he left no evidence of the visit.

Probably a majority of those who read *Desert Magazine* have visited these caverns. It is a trip no American should miss. Millions of descriptive words have been written about the strange formations found here, but neither writer nor artist could do the place justice.

* * *

At the end of the down trail, the visitor has the option of returning under his own power, or taking the elevator to the surface at 25 cents a ride.

But this Carlsbad elevator is one commercial enterprise which does not solicit patronage. In his address to those assembled in the bottom of the caverns for the impressive Rock of Ages ceremonial, Col. Boles intimated that the mechanical lift was there for the convenience of those "too old or fat or infirm" to make the round trip on foot. After that remark, of course no self-respecting soldier would dare ride out.

There is a 50-cent fee for luncheon served deep down in the cavern. And I want to remark in passing that the army has nothing on the Park service when it comes to feeding a big crowd with a minimum of time and effort.

If you have not already made this Carlsbad caverns trip, I would recommend it for a place near the top of that list of excursions you are dreaming about for a future day when tires and gasoline again are plentiful. Carlsbad is a good place for humans who get exaggerated ideas of their own importance—which we all do at times.

* * *

The most conspicuous thing on the landscape here from a geological standpoint is limestone. This prairie is merely a great limestone plain in various stages of decomposition. No one had ever figured out a useful purpose for these grey rocks until the soldiers moved in. And now, any day of the week, the airplane mechanics can be seen spending their off hours beautifying the areas around their barracks with sidewalks and curbs built from New Mexico's boundless supply of limestone rocks.

* * *

A week ago six inches of snow fell during the night. "Unusual weather," the old-timers assured me. It was a rather novel experience for one who has lived below sea level in the lower basin of the Colorado river for 20-odd years.

But the snow did not last long. And as I waded around in the mud that followed, I had visions of this desert prairie a few months later covered with a gorgeous display of wildflowers. Those flowers, if they come, will be worth all the annoyance of cold wet feet just now. I am curious to know just what this part of the Southwest will produce in the way of wildflowers. At this time of the year the only botanical friends I recognize as I drive around the field are yucca, mesquite and creosote.

But it seems to be part of Nature's plan to produce the rarest botanical beauty in the most forbidding regions, and I am sure there will be some colorful surprises at a later day when spring sunshine begins to pour down on this prairie soil.

* * *

The January issue of *Desert Magazine* arrived in camp just a few days ago, and I am sure no reader devoured its contents more eagerly than I did. I assure you it is a great thrill reading an issue of *Desert* which—for the first time in more than five years—I had no part in planning and editing. Lucile and Bess and Evonne and those other loyal associates who remained at home to keep the presses running during my absence are doing a grand job. How proud I am to have them as my pals in the publishing business.

BOOKS OF YESTERDAY AND TODAY

—a monthly review of the best literature of the desert Southwest, past and present.

UNUSUAL NOVEL TELLS HARVEY SYSTEM STORY

Girls of Fred Harvey "eating houses" along the Santa Fe railroad from Kansas west to Los Angeles have contributed definitely to Southwestern society. And for years here has remained a story complete in every detail except for its transition to type ignored by writers until Samuel Hopkins Adams produced *THE HARVEY GIRLS*.

Back in the 1890's Fred Harvey scoured the East for girls who could meet his rigid requirements. He found them, and then lost many of these girls when they married railroaders or townsmen at various points in the Southwest. Some of these girls became the founders of social, political and financial dynasties that today are strongly influential in most towns along the Santa Fe.

In the days of 1890 girls found living rugged and hard, although they were well-cared for by the Harvey company. As the twentieth century turned these conditions improved and even more girls joined the Harvey system.

The author in *THE HARVEY GIRLS*, published late in 1942, has written a refreshing and highly entertaining novel. He has spiced his story with "authentic bits of Harveyana" direct from dormitories along the line. It is excellent reading, making a welcome interlude in any reader's life.

Mr. Adams is a veteran novelist, reporter and collector of Americana and in this book he is at his best, writing in a sparkling, easily read style. The Harvey line because of its growth in close association with the Southwest is an American social institution. In 1876 it consisted of a single lunchroom at Topeka, Kansas. Today it includes such elaborate hotels as La Fonda at Santa Fe, La Posada at Winslow, El Tovar at Grand Canyon, and El Garces at Needles. 327 pp., \$2.50. Random House.

VIRGINIA CITY DAYS DEPICTED IN BIOGRAPHY

Grandmother Flannery in 1937 still clung tenaciously to her home on the Divide overlooking Virginia City. Since her arrival in Nevada's famous silver camp in 1862, she had seen millions of dollars go out to San Francisco, millions go out to pay costs of the Civil war, and millions expended on flamboyant living during the extravagant silver seventies.

Her grandson, Flannery Lewis in *SUNS GO DOWN*, published in 1937, has written a human story, half portrait, half memoir of this remarkable woman. Opening paragraphs of this 226-page biography quickly reveal that the author has captured

more than the ordinary chronological history of a famous mining town. The pulse of Virginia City surges strong as Grandmother relives the 70's and 80's when lawlessness held sway, when some men made millions boring into depths of Mt. Davidson and others made millions speculating on stock markets under the brow of that same peak when fire swept through most of the town to be followed quickly by an equally disastrous tornado.

Mr. Lewis artistically reproduces his grandmother's memories in a charming mellow style. But sharing interest with this re-creation of the past is Mr. Lewis' portrait of Grandmother herself. He paints her prejudices with affectionate humor as she disparages the automobile, the tourist and modern plumbing. Grandmother is lovable and alive as she is pictured by Lewis. Her reactions to history in the making are delightful, amusing and exceedingly wise. After her first introduction to Mark Twain, she thereafter referred to him as "that printer Clemens." Lewis deserves the attention of students of western history for this fascinating book of an era that is not likely to return. \$2.00. Macmillan Co., New York.

LIFE OF GHOST TOWN RECONSTRUCTED BY WRITER

In a fast moving, exciting story of the desert's early-day silverlands, Neill C. Wilson has presented absorbing drama of old Panamint in *SILVER STAMPEDE*. First published in 1937, it remains high among good selling non-fiction books.

The author, who also wrote *TREASURE EXPRESS*, a story about epic days of Wells Fargo, has given particular attention in *SILVER STAMPEDE* to basic social aspects of the town and has flavored his manuscript with hitherto unpublished information contributed by those who were familiar with Panamint during its short violent life. Factual material came from many sources—among these Mrs. Georgina Sullivan Jones, wife of Senator J. P. Jones, who figured so prominently in Panamint's existence and who made his first millions at Virginia City; W. A. Chalfant, the Sage of Inyo, and his newspaper the *Independent* whose brittle-brown files recorded the events of Panamint.

The silver city, born when highway robbers first discovered the bonanza when they fled into heights above Death Valley to escape capture by posses, found itself peopled with characters who later rubbed elbows in Bodie, Tombstone and the Black Hills.

Figures prominent in the history of Vir-

ginia City naturally gravitated to this new outpost where tales of pioneering at its hardest were woven. One finds himself intensely interested in characters of Panamint as Mr. Wilson cleverly depicts them in terse brilliant writing. In the pages of *SILVER STAMPEDE* are humor, pathos, anguish, terror and happiness sufficient to meet the demands of anyone.

When R. C. Jacob's party rediscovered Panamint's silver hoard and staked claims, rumor spread rapidly. On the heels of the strike the miner, the merchant, the gambler and the gunman all rushed to Panamint, where they mingled to evolve one of the stormiest frontier towns of the West.

Uncle "Billy Bedamned" Wolsesburger, aged peddler, limped 417 miles over the desert whacking his little burro. John Schober crossed 166 miles with a big whipsaw on his back. Clem Ogg, who could cut the seat out of a man's trousers with the lash of his long bull whip, hitched 14 freight wagons behind a half-mile parade of bullocks and set out.

Later more famous characters of history strode down the rocky paths which residents of Panamint called streets. These were George Hearst, father of W. R. Hearst, Lucky Baldwin, and Senators J. P. Jones and "Fifteenth Amendment" Bill Stewart.

Through the pages of *SILVER STAMPEDE* one obtains a picture of Panamint as it fitted into the puzzle of life in the silver mining district then defined by Virginia City, San Francisco, Los Angeles, Bakersfield, San Bernardino and Panamint. 318 pp., end maps, photographs, \$3.00. Macmillan Co., New York.

—Harry Smith



TALES of the PIONEERS

By W. A. CHALFANT

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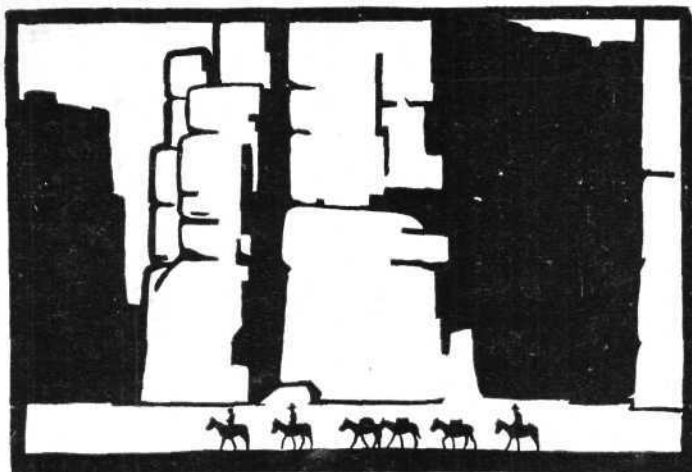
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